American Petroleum Institute
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Washington, D.C. 20005

Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 12, No. 10

NOVEMBER 16, 1988

OCTOBER 1988

SUMMARY

Substantial increases in deliveries of petroleum products in October, along with the continued decline in domestic production, combined to increase imports for the month to a recent-year record.

Total deliveries' growth rate jumped to 5.5 percent in October, after averaging less than 1 percent over the second and third quarters. October's large increase was the result of strong gains for gasoline, residual fuel oil, and the "other oils" category.

Gasoline deliveries, which generally had been weak in recent months, rose 4 percent in October. In fact, year-to-date deliveries of gasoline averaging more than 7.3 million B/D are now within less than 3 percent of the all-time high for a similar period established in 1978. October's residual fuel oil deliveries leaped nearly 30 percent in response to fuel switching and an apparent tip in the balance towards more domestic bunker purchases versus foreign sources. Residual fuel oil's increase accounted for a third of October's year-to-year gain in total deliveries. "Other oils" deliveries increased nearly 5 percent.

Though deliveries of kerosine jet fuel declined year to year, they would also have shown an increase of more than 5 percent if deliveries last October had not been well above the prevailing trend. Thus, the only major product category that showed some weakness in October was distillate fuel oil. Distillate deliveries for the month were nearly flat—in contrast with estimated consumption growth closer to the year-to-date increase of 3.6 percent.

Offshore production in the Gulf recovered from September's hurricane-related decline, but domestic crude oil output nevertheless fell 330 thousand B/D from last October. Since early 1986, domestic production has declined by more than 1.1 million B/D.

Product imports, reaching the highest October level since 1974, brought total imports to 7.6 million B/D—surpassing the recent year record set a year ago July. Reflecting gasoline deliveries' growth, imports of gasoline and components of over 540 thousand B/D exceeded the summer's already high levels while refinery production of this product rose over 4 percent from last October. Despite the month's high level of petroleum imports, strong deliveries resulted in a contraseasonal decline in total stocks of 11 million barrels.

PRODUCT SUPPLIED[1/]

Gasoline

YEAR-TO-DATE DELIVERIES CLOSE IN ON 1978 RECORD.

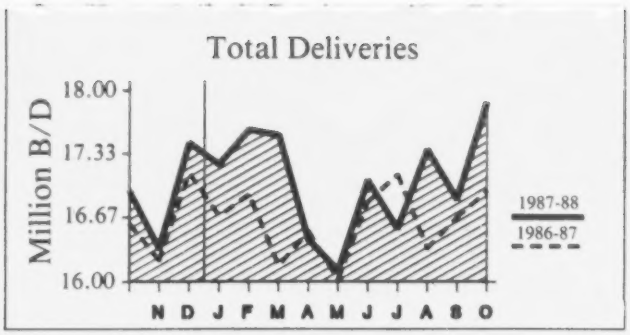
Experiencing one of the strongest increases since June, gasoline deliveries in October rose 4 percent over a year ago—contrasting with generally weaker results in recent previous months. Though the latter weakness has been in seeming contradiction with data on travel and other indicators of demand, October's jump has helped deliveries for the year to catch up with estimated consumption growth on the order of 2 percent.

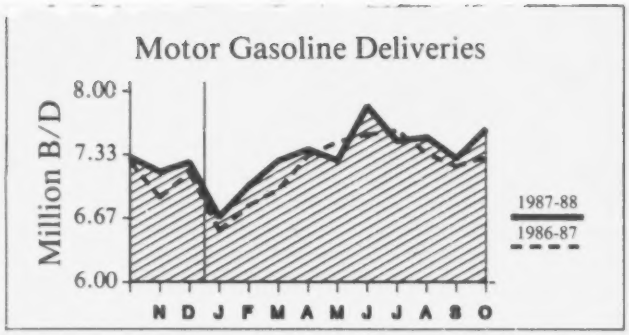
The month's strong increase in deliveries brings the year-to-date growth for gasoline to 1.7 percent. Even though this year's deliveries increase still falls short of last year's 2.4 percent rise, the more than 7.3 million B/D average for the first ten months of this year is the highest level since 1979 and less than 3 percent short of 1978's all-time record for the same period.

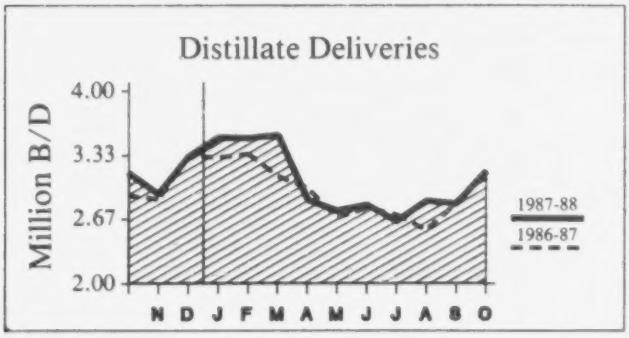
The fact that the economy has grown by nearly 30 percent in the past decade, while gasoline consumption has yet to surpass the level of a decade ago, is a measure of the degree to which the gasoline market has changed over the period. It is true that higher prices helped to dampen demand growth in the years following the 1978 demand peak. But even as prices receded in the 1980s, continued improvement in the fleet's average fuel efficiency has held demand growth to an average 2 percent per year, 1982 to 1987. This contrasts with an average rate nearly a point and a half higher during most of the 1970s—when the economy was actually growing less rapidly than it has more recently.

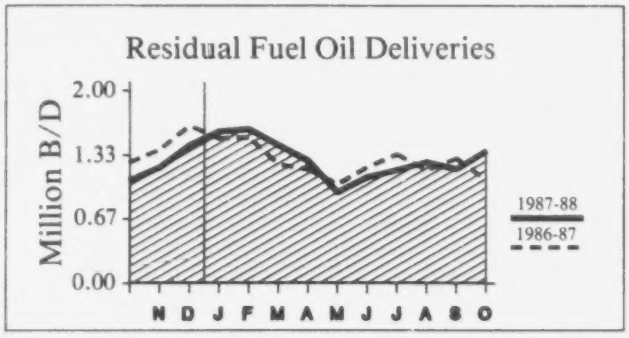
API ESTIMATES

	OCTOBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.9	5.5	17.1	2.7
Crude oil production[2/]	8.0	(3.9)	8.1	(2.5)
Total imports[3/]	7.6	8.7	7.0	7.0
Stocks (million bbl)[3/]	1,053	(2.0)	na	na









Distillates

DESPITE COLD WEATHER, DELIVERIES UP ONLY SLIGHTLY. October's distillate deliveries rose only slightly compared with last year. This is despite consumption growth which is estimated to be in line with the year-to-date deliveries increase of 3.6 percent, largely because of continued growth in transportation usage. Though passage of the tax "corrections" bill, which included changes for off-highway diesel excise tax collections, was delayed in House-Senate conferences in September, it has since been passed. However, the effective date has been moved to the first of next year, so that affected users still have an incentive to postpone less-needed purchases until that time.

Unseasonally cool weather in the eastern U.S. around mid-month raised October's heating degree day average to more than 30 percent colder than normal. However, last October had also been unusually cold, so that we estimate little net effect from weather in comparing last October's deliveries with this year's.

Residual Fuel Oil

YEAR-TO-YEAR RISE REACHES NEARLY 30 PERCENT. Deliveries of residual fuel oil are estimated to be 1,373 thousand B/D, representing an increase of 15.8 percent from September and an increase of 28.4 percent from a year ago. The estimate, an apparent reversal of several months' weakness during much of the year, represents a substantial recovery in deliveries of this product.

Almost all of the major consuming sectors are believed to have contributed to the substantial increase in deliveries. Several large industrial and utility customers, continuing a trend from the previous month, are believed to have accelerated their switch from natural gas to heavy fuel oil as a result of heavy fuel's favorable economics. In addition, the colder-than-average weather is also believed to have reinforced the upward spike in deliveries to utility customers.

Bunker fuel markets, which had also been weak for several months, are also reported to be showing some strength in most regions of the country, partly due to seasonal factors. Several contractors, who had previously been reluctant to purchase more than minimum contractual volumes, are now reported to be making significant spot purchases of bunker fuel as result of recent price declines. In fact, bunker fuel on the East Coast is becoming more competitive with other sources, enabling that region to recapture some of its recently lost market share from the Rotterdam market.

Kerosine Jet Fuel

STRENGTH A YEAR AGO CONVERTS GROWTH TO A DECLINE. Though deliveries of kerosine jet fuel have been slowing this year in line with air travel, October's 2.7 percent decline, on the surface, would appear to be an uncharacteristically weak showing. However, deliveries last October were roughly 100 thousand B/D above trend; compared with a more typical volume for last October, this October's deliveries would have been up by more than 5 percent.

This is not far out of line with air traffic increases. Though domestic passenger travel has shown only slow growth so far this year, international and cargo traffic increases have been strong enough to keep growth in miles flown running in the 3 to 4 percent range.

Other Oils

DELIVERIES RISE ALMOST 5 PERCENT. Deliveries of other oils are estimated at 4,459 thousand B/D, one of the highest levels of the past nine years. The month's deliveries represent an increase of 2.8 percent from September and 4.8 percent from October 1987. Almost all of the products in this category are believed to have contributed to the sizable increase in deliveries.

Petrochemical feedstocks are believed to have contributed the major share of the increase in the other oils category. Continuing a pattern of the past several months, olefin plants were continuing to run at close to full capacity in response to strong, export-led petrochemical demand. Several plants which were reported to be down in September due to the hurricanes, as well as maintenance problems, were back in production in October, contributing to the month-to-month increase. In particular, propane deliveries are believed to have increased due to both a continuing recovery in propane demand for petrochemical feedstock purposes as well as the colder-than-average weather. Ethane is maintaining its strength, but its continuing price rise has apparently resulted in increases in demand for ethane-propane mixtures, displacing some of the earlier strength in purity ethane. Deliveries of butanes as a petrochemical feedstock are also believed to have risen in anticipation of new vapor pressure requirements for gasoline that would increase butane availability for that purpose. Deliveries of the heavier feedstocks, gasoil and naphtha, are also reported to have increased during the month as a result of their price competitiveness as well as continuing strength in petrochemical feedstock demand.

Asphalt and road oil deliveries are thought to be strong for this time of year, having declined by less than the seasonal average from previous months. Levels of road building and maintenance are reportedly continuing to be robust as a result of appropriations previously delayed in the summer. As a result, cold weather is not believed to have hampered these programs during the month. Refinery gas production, however, is reported to be slightly lower than last month as a result of seasonal declines in motor gasoline production.

SUPPLY [1/]

Production

OFFSHORE RECOVERS, BUT DOMESTIC OUTPUT STILL DOWN. Despite a recovery in offshore production from September, when platforms in the Gulf had been evacuated for several days due to the threat of hurricanes, October's domestic crude oil production still fell 330 thousand B/D or 3.9 percent from last October. Alaskan production, accounting for a full 25 percent of the total, rose slightly from a year ago, while production in the lower 48 declined by over 350 thousand B/D or 5.6 percent.

The decline in drilling activity over the past three years has not only contributed to production's decline, but has also eroded the upstream sector's capacity to expand drilling activity quickly. With the number of available drilling rigs falling nearly 40 percent since 1985, this capacity would likely take time and major expenditures to restore. Upstream employment, too, has declined by nearly 30 percent, and indications are that workers who have moved on to other geographic areas and industries are a labor force regained only with difficulty.

Imports

NEW RECENT-YEAR RECORD SET FOR IMPORTS IN OCTOBER. Imports reached more than 7.6 million B/D in October, the highest monthly level since early 1980, exceeding the 7.5 million B/D, recent-year record set a year ago July.

Product imports were especially strong, with increases for most major products raising the month's volume to the highest October level since 1974. The more than 400 thousand B/D increase in product imports accounted for two thirds of October's 8.7 percent rise in total imports.

Imports of gasoline and components, which had already set a record summer average of close to 520 thousand B/D, reached more than 540 thousand B/D in October, up about 90 thousand B/D from a year ago. Distillate imports were also strong, rising by 113 thousand B/D to 350 thousand B/D, while residual fuel oil imports were up about 180 thousand B/D from a year ago.

Refinery Operations

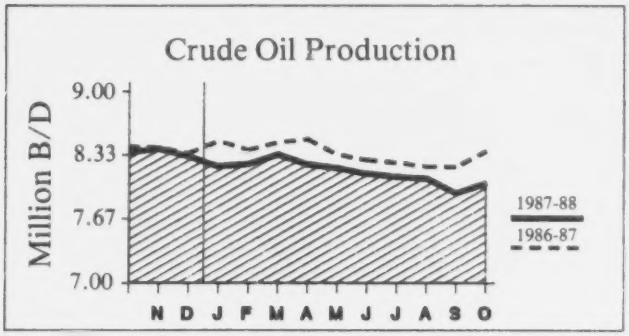
INPUT RISES, GASOLINE OUTPUT UP OVER 4 PERCENT. In line with usual seasonal patterns, October refinery utilization declined from the previous months' levels to 83.1 percent—but remained about half a point higher than a year ago. Though this is one of the lower utilization rates of the year (the lowest was 81.1 percent) it exceeds the highest monthly utilization rate experienced only three years ago. Since 1985, when the highest rate was 81.2 percent, product deliveries a full 1.4 million B/D higher have so far been nearly matched by an increase in refinery input; increases in product imports have recently also come into play in meeting growing supply needs.

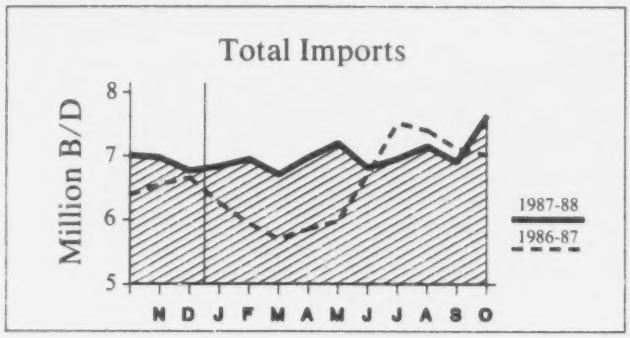
For October, input to distillation units was up 2.6 percent from a year ago, though strong emphasis on gasoline production for this time of year brought about a rise in output of this product of over 4 percent. Distillate production was up 1.7 percent while residual fuel oil output declined slightly.

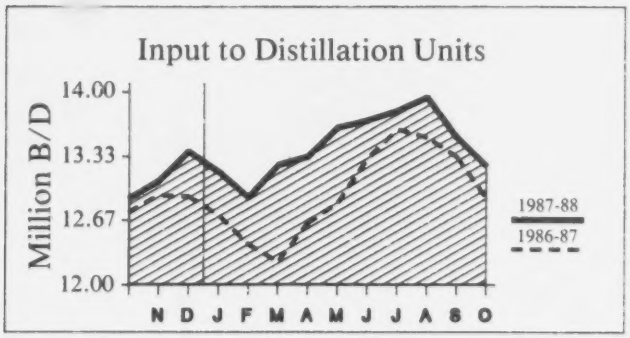
Inventories

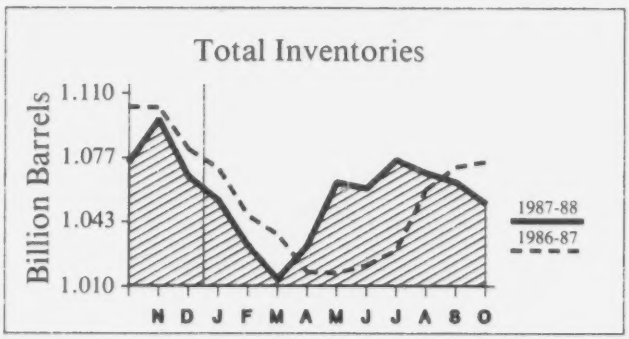
STOCKS FALL DESPITE OCTOBER'S HIGH IMPORTS. October's high imports were not enough to counterbalance the large increase in deliveries for the month, and total stocks fell 11 million barrels. This contrasts with a normal seasonal build of about 5 million barrels. Crude stocks, after having reached in September the lowest level in more than a year, rose by over 12 million barrels. This put crude oil inventories back within the range they had experienced prior to the buildup in late 1987 and early this year.

Though, by conventional wisdom, distillate inventories should be rising in October, in fact, this is the third October in a row in which stocks of this product have either held steady or declined; but, in recent years, refinery production and distillate stocks have typically risen in November and December once refinery turnarounds have been completed. The diminished role of inventories in winter distillate supply was illustrated last season, when only about 6 percent of deliveries were supplied from inventory over the October-March period. This October's month-end distillate stocks, though declining slightly from the end of September, were still higher than a year ago by 7 million barrels. Gasoline stocks declined 7 million barrels during October, in line with normal patterns for the month.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 556 million barrels as of October 31, 1988).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	OCTOBER			YEAR-TO-DATE		
	1988[1]	1987[2]	% Change	1988[3R]	1987[2]	% Change
Products Supplied:						
Total motor gasoline	7,596	7,305	4.0	7,331	7,206	1.7
Finished leaded motor gasoline*	1,262	1,670	(24.4)	1,368	1,774	(22.9)
Finished unleaded motor gasoline*	6,334	5,635	12.4	5,963	5,432	9.8
Naphtha-jet	218	203	7.4	211	206	2.4
Kerosine-jet	1,230	1,264	(2.7)	1,220	1,174	3.9
Distillate fuel oil	3,163	3,151	0.4	3,051	2,946	3.6
Residual fuel oil	1,373	1,069	28.4	1,291	1,253	3.0
All other oils[4]	4,459	4,253	4.8	4,119	4,067	1.3
Reclassified[5]	- 172	- 304	(43.4)	- 164	- 234	(29.9)
Total domestic products supplied	17,867	16,941	5.5	17,059	16,618	2.7
Exports	824	646	27.6	839	736	14.0
Total products supplied	18,691	17,587	6.3	17,898	17,354	3.1
Supply:						
Domestic production:						
Crude oil[6]	8,034	8,364	(3.9)	8,142	8,347	(2.5)
Natural gas liquids	1,615	1,602	0.8	1,609	1,589	1.3
Other supply[7]	1,063	691	53.8	1,088	844	28.9
Total domestic supply	10,712	10,657	0.5	10,839	10,780	0.5
Imports:						
Crude oil, total	5,288 10/	5,085 10/	4.0	4,946 10/	4,573 10/	8.2
Canadian	686	638	7.5	683	614	11.2
Other	4,602	4,447	3.5	4,263	3,959	7.7
Products, total	2,336	1,926	21.3	2,066	1,980	4.3
Residual fuel oil	593	414	43.2	551	556	(0.9)
Other	1,743	1,512	15.3	1,515	1,424	6.4
Total imports	7,624	7,011	8.7	7,012	6,553	7.0
Total supply	18,336	17,668	3.8	17,851	17,333	3.0
Stock change, all oils	- 355	+ 81	XXXX	- 47	- 21	XXXX
Refinery Operations						
Input to crude oil distillation units	13,236	12,896	2.6	13,452	12,957	3.8
Operable capacity	15,922	15,592	2.1	15,911	15,588	2.1
Refinery utilization (%)[8]	83.1%	82.7%	0.5	84.5%	83.1%	1.7
Crude oil runs	13,088	12,733	2.8	13,291	12,805	3.8

Stocks (millions bbls.)	1988		1987[2]	% Change from ...	
	Oct. 31[9]	Sep. 30[9]	Oct. 31	Previous Month	Year Ago
Crude oil 10/	336.7	324.2r/	355.9	3.9	(5.4)
Unfinished oils	109.4	108.2	104.9	1.1	4.3
Total motor gasoline**	214.0	221.4r/	218.0	(3.3)	(1.8)
Finished leaded motor gasoline*	38.2	41.5	51.6	(8.0)	(26.0)
Finished unleaded motor gasoline*	139.0	141.4r/	130.2	(1.7)	6.8
Naphtha-jet	6.4	6.6	7.1	(3.0)	(9.9)
Kerosine-jet	41.2	41.6r/	42.7	(1.0)	(3.5)
Distillate fuel oil	128.4	129.9	121.0	(1.2)	6.1
Residual fuel oil	40.6	44.3	45.6	(8.4)	(11.0)
All other oils	176.1	187.6r/	179.1	(6.1)	(1.7)
Total all oils	1,052.8	1,063.8r/	1,074.3	(1.0)	(2.0)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-August, U.S. Department of Energy, September-October, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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SUMMARY

Imports in November exceeded October's recent-year record, while total deliveries experienced one of the largest jumps so far this year and crude oil production appeared to be declining at an increasing rate.

Deliveries rose more than 1.3 million B/D, or 8.1 percent, compared with a year ago, with all major products, as well as the "other oils" category, experiencing above-average increases. Similar surges in deliveries have occurred in the past, when, just as recently, purchases have apparently been spurred by signs of reversal in a downward price trend.

Gasoline deliveries rose 3.6 percent in November. Combined with a similarly large rise for October, the increase lifted year-to-date deliveries growth to an even 2.0 percent, closer to estimated consumption growth than had been the case a few months ago. Distillate deliveries' increase of 7.3 percent was greater than would have normally been expected, and residual fuel oil, kerosine jet fuel, and "other oils" all experienced gains of 10 percent or more. Residual fuel oil's substantial 16.7 percent increase, related to fuel switching and likely buying for inventory, followed on the heels of another sizeable increase for October, but kerosine jet fuel's more than 14 percent rise reversed a decline for the previous month related to unusual deliveries patterns a year ago. Strong petrochemical feedstock demand continued to bolster deliveries of "other oils".

November's year-to-year decline in domestic crude oil production, at 361 thousand B/D, was the largest so far this year. In Alaska, production has been steady since the coming on stream of the Endicott field about a year ago, while the decline rate of lower 48 production appears to have become more rapid with this year's lower crude oil prices.

Imports, which in October had already reached the highest level since 1980, rose to nearly 8 million B/D in November. The month's high imports, though partially augmented because of the availability of attractively priced crude on world markets, reflected more than the escalation of OPEC production in recent months. Mirroring the growth in demand and decline in domestic production over the past three years, imports for the first eleven months of this year combined have averaged the highest since 1980 as well. November's product imports were the highest for the month since 1974, with strong showings for all major products.

Input to distillation units rose a little over 1 percent from last November, though with the strong deliveries of gasoline in the past two months and delayed turnarounds at some refineries, product slates were tilted towards gasoline more than usual for this time of year.

Despite the month's high imports, November's total inventories fell by 5 million barrels, contrasting with a typical seasonal rise of about 10 million barrels and continuing the pattern of the past several months. Distillate stocks held steady, ending the month at close to those of a year ago. Even with the month's strong deliveries, record imports of gasoline and components and continued refinery emphasis on gasoline production lifted gasoline stocks by nearly 5 million barrels.

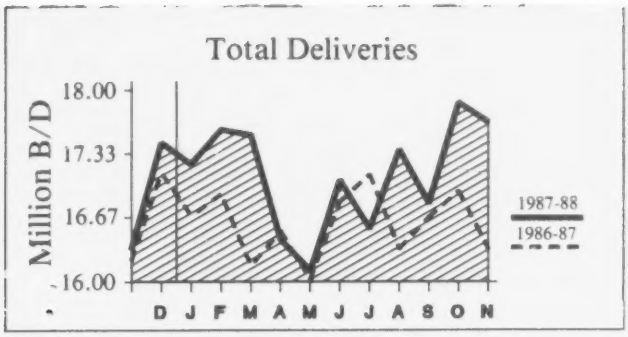
PRODUCT SUPPLIED[1/]

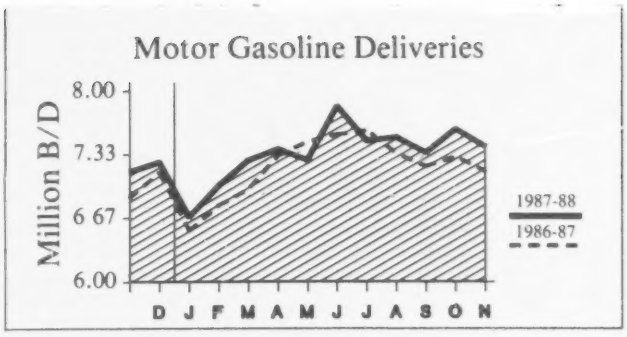
Gasoline

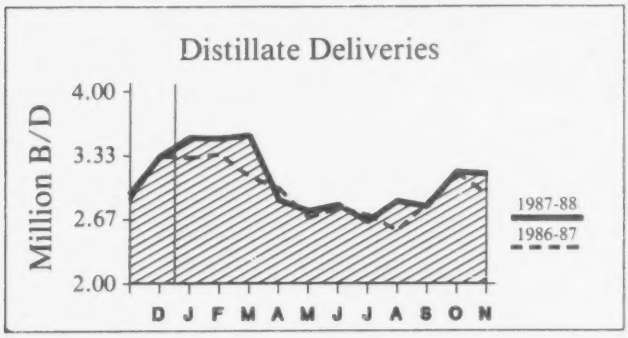
SECOND STRONG GAIN IN A ROW. Nearly repeating October's unusually large increase, November's gasoline deliveries rose 3.6 percent from a year ago. These recent gains, following a period of slower deliveries increases, have pushed the year-to-date rise in gasoline deliveries to an even 2.0 percent over a year ago, more in line with estimated consumption growth and helping to fade the apparent discrepancy between the two.

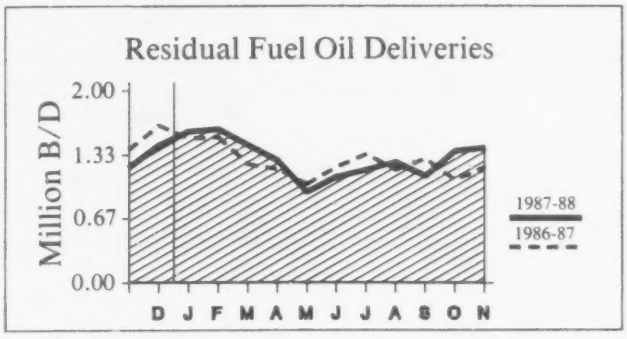
API ESTIMATES

	NOVEMBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.7	8.1	17.1	3.1
Crude oil production[2/]	8.0	(4.3)	8.1	(2.6)
Total imports[3/]	8.0	14.1	7.1	8.0
Stocks (million bbl)[3/]	1,057	(3.6)	na	na









In fact, while deliveries have been picking up, travel growth may be moderating, but only slightly. Increases in vehicle miles traveled, which had been averaging 3.7 percent through July, in more recent months have slowed to a little more than 3 percent. The slowing shows an apparent correspondence with the rate of growth in the economy, which, according to Commerce Department data, has been moderating as well.

Distillates

BUYING BEYOND CURRENT NEEDS APPARENT. After a weak October, November's distillate deliveries rose 7.3 percent, year to year. With temperatures 8 percent warmer than normal and slightly warmer than last year, the month's strong increase can hardly be attributed to cold weather. More likely, some distributors and end users moved to take advantage of the recent months' decline in prices, which appeared to be bottoming out.

Though still increasing, year to year, truck and rail traffic have both shown signs of moderating growth in recent months. We estimate that truck traffic growth has slowed to about 5 percent; rail traffic, which had averaged over 8 percent growth in the first half, has more recently been running about 3 percent. Since transportation usage has been one of the main contributors to distillate consumption's growth this year, the slowing in traffic growth indicates that overall consumption growth may have slowed as well, to roughly 3 percent.

Residual Fuel Oil

DELIVERIES RISE ALMOST 17 PERCENT. Deliveries of residual fuel oil are estimated to be 1,406 thousand B/D, an increase of 2.4 percent from last month and 16.7 percent from November 1987. The year-to-year increase, though less than October's inventory-related surge, reflects the maintenance of the recent strength in heavy fuel oil markets.

Electric utilities are reported to have increased their purchases of heavy fuel oil and are believed to account for much of the month-to-month increase in total residual fuel oil deliveries. As in the past few months, heavy fuel oil's price advantage apparently led to an increase in its share of the electric utility market relative to natural gas, more than compensating for the effects of a warmer-than-average November. Industrial demand is believed to have maintained its recent strength but not to have contributed substantially to the overall increase in residual fuel oil deliveries.

Bunker fuel deliveries were reported to have increased slightly from levels of last month, buoyed by seasonally high grain shipment activity in the Gulf Coast. East Coast deliveries were thought to have maintained their previous levels of activity.

Kerosine Jet Fuel

NOVEMBER REVERSES OCTOBER'S DECLINE. Year-to-year comparisons for kerosine jet fuel deliveries have fluctuated markedly between October and November of this year, due partly to unusual deliveries patterns last year. November's increase of 14 percent contrasted with a decline for October, but for the two months combined the deliveries increase has averaged about 5 percent—roughly in line with recent growth in miles flown.

Though air traffic growth is still less than at the beginning of the year, there appears to have been a slight up-tick in traffic growth in more recent months. After running at about a 3 percent rate during early summer, more recent increases are estimated at about 4 percent.

This year's lower growth in miles flown is largely the result of slower growth in passenger traffic. In fact, were it not for the effects of the lower dollar on international travel, revenue

passenger miles would have shown little if any increase this year. Higher fares account for some of this moderating growth in passenger traffic, with revenue per passenger mile so far this year up about 8 percent over a year ago. Though, after accounting for inflation, this amounts to only about a 4 percent real increase, it contrasts with recent previous years; revenue per passenger mile rose only about 2 percent last year, and had declined about 6 percent the year before.

Other Oils

CHEMICAL DEMAND CONTINUES TO SPUR DELIVERIES.

Deliveries of other oils are estimated to be 4,425 thousand B/D, representing a decline of 0.8 percent from last month but a 10.1 percent increase from November 1987. The decline from last month, however, is smaller than the seasonal norm because of unusually robust deliveries in petroleum feedstocks and asphalt and road oil, all of which are believed to have contributed to the substantial year-to-year increase.

As in the past several months, deliveries of petrochemical feedstocks are believed to account for the bulk of the increase in other oils deliveries. Because of the high demand for olefins, imports of petrochemical feedstocks are also reported to have increased substantially, and some other petrochemical plants which had been idle for several years are reported to have started resuming production recently. In particular, naphtha and butanes are reported to have registered sizeable increases in deliveries as ethylene feedstocks. However, market conditions are reported to have caused some product switching. Because of their favorable economics, ethane-propane mixtures are believed to have increased their share of the olefin market, displacing small quantities of purity ethane. Natural gasoline, with its high benzene and toluene content, has reportedly become more attractive at the expense of propane, whose deliveries are also believed to have declined slightly. In addition, the milder-than-average weather is also believed to have contributed to the slight decrease in propane deliveries.

Asphalt and road oil deliveries were reported to have been unusually strong during the month. The warmer weather is thought to have stimulated road building activity and maintenance that had been deferred from last month, especially in the Northeast, contributing to the sizeable year-to-year increase in other oils deliveries as a whole.

SUPPLY [1/]

Production

CRUDE OIL'S DROP LARGEST FOR YEAR.

Domestic crude oil production fell 361 thousand B/D, or 4.3 percent, in November compared with a year ago, the largest decline so far this year. Partly responsible for the larger apparent decline was that, unlike past months, there was essentially no year-to-year increase in Alaskan production in November. These increases, however, mainly resulted from comparisons against Alaskan production before the Endicott field came on stream late last year. In fact, Alaskan production has been essentially flat since that time, hovering near 2 million B/D.

While Alaskan production has been level so far this year, sagging crude oil prices appear to have enlarged the decline trend in lower 48 production. A trend fitted to last year's production shows an average annual decline rate of about 3.8 percent, or roughly 240 thousand B/D per year. For the first eleven months of this year, even allowing for temporarily depressed offshore production in September because of hurricanes off the Gulf Coast, the decline trend measures above 5 percent or 320 thousand B/D per year.

Imports

NOVEMBER EXCEEDS RECENT-YEAR RECORD.

Exceeding the recent-year record set in October, total imports in November rose to nearly 8 million B/D. Crude oil imports were strong, and product imports rose to the highest November level since 1974. Part of the recent surge in imports can be attributed to the ready availability of crude at reduced prices because of increased OPEC production in the past several months.

But because of the steady rise in demand and declining domestic production, imports for the first eleven months as a whole have also set a recent-year record. The 7.1 million B/D imported so far this year has been the highest since 1980. In the past three years, imports have grown by 2.2 million B/D, with increasing demand accounting for about two thirds of the increase and declining domestic production accounting for most of the remainder.

As in October, a major portion of the increase in November's imports was in the form of products. Imports of gasoline and components reached a new high of 630 thousand B/D for the month, up about 80 thousand B/D from a year ago. Distillate and residual fuel oil imports were also strong, helping to counterbalance the year-to-year decline in refinery production resulting in part from delayed turnarounds in progress during November. Distillate imports rose nearly 140 thousand B/D from a year ago, while residual fuel oil imports rose more than 160 thousand B/D.

Refinery Operations

PRODUCT SLATE TILTED TOWARDS GASOLINE.

Input to distillation units rose 1.3 percent in November over a year ago, though some refineries were undergoing turnarounds delayed from earlier in the season. The delayed turnarounds were reflected in the product slate, which was still tilted towards gasoline more than usual for November in response to strong deliveries of that fuel in the past two months. Gasoline production for the month rose 1.5 percent over last November's, while distillate and residual fuel oil output declined by 4.4 and 2.5 percent respectively.

November's refinery utilization rate of 83.2 percent was up nearly a point from last year. As frequently noted here, this

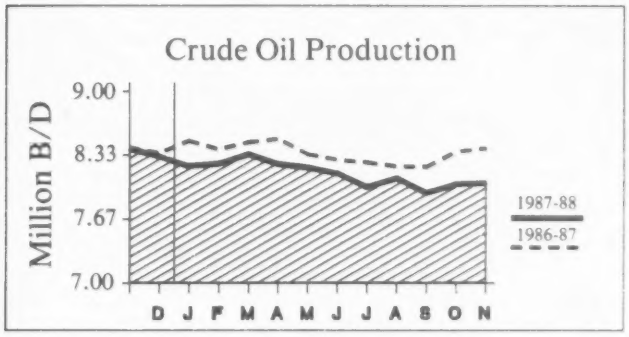
rate is calculated on the basis of operable capacity, including capacity not in actual operation. This idle capacity has been running at about 1 million B/D this year, down from as much as 2 million B/D in the early 1980s. As a percent of capacity in actual operation, the month's utilization works out to a rate in the high 80s—for a month which has traditionally been an off-peak period for refinery activity.

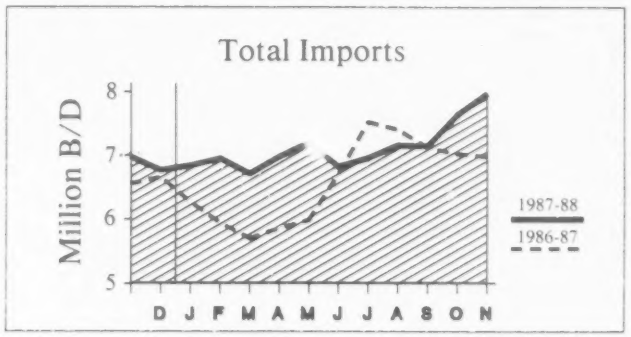
Inventories

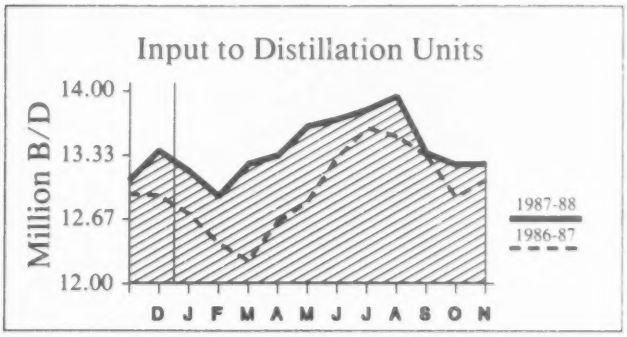
STOCKS CONTINUE THEIR DECLINE. Despite November's high imports, strong deliveries led to a contraseasonal, 5 million decline in total stocks for the month. Since July, inventories have fallen about 18 million barrels, and after accounting for typical seasonal patterns, the drop amounts to more than 50 million barrels.

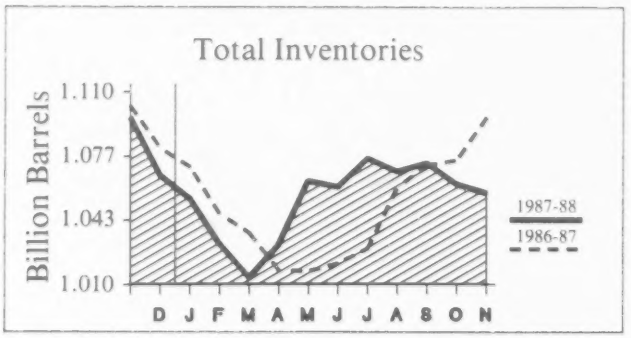
Thus, on a days supply basis, no [illegible] U.S. stocks. In fact, for the previous five Novembers, total inventories have represented from 67 to 73 days of total deliveries. Even adjusting November's days-of-supply calculation for the distortion caused by unusually strong deliveries, the month's stocks still represent a days supply figure in the low 60s.

Crude oil stocks rose only slightly in November. Refineries' emphasis on gasoline, combined with record imports of gasoline and components, helped to raise gasoline stocks by nearly 5 million barrels despite strong deliveries. Even so, gasoline inventories ended the month 6 million barrels lower than one year earlier. Distillate stocks held steady during November, ending the month at about the same level as a year ago—though deliveries data imply an inventory build at the nonprimary level, inventories not measured in API or Department of Energy data.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 559 million barrels as of November 30, 1988).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	NOVEMBER			YEAR-TO-DATE		
	1988[1]	1987[2]	% Change	1988[3R]	1987[2]	% Change
Products Supplied:						
Total motor gasoline	7,412	7,151	3.6	7,343	7,202	2.0
Finished leaded motor gasoline*	1,146	1,562	(26.6)	1,352	1,755	(23.0)
Finished unleaded motor gasoline*	6,266	5,589	12.1	5,991	5,447	10.0
Naphtha-jet	220	221	(0.5)	212	207	2.4
Kerosine-jet	1,300	1,138	14.2	1,229	1,171	5.0
Distillate fuel oil	3,145	2,932	7.3	3,057	2,945	3.8
Residual fuel oil	1,406	1,205	16.7	1,295	1,249	3.7
All other oils[4]	4,425	4,020	10.1	4,152	4,062	2.2
Reclassified[5]	- 241	- 324	(25.6)	- 179	- 243	(26.3)
Total domestic products supplied	17,667	16,343	8.1	17,109	16,593	3.1
Exports	747	737	1.4	812	736	10.3
Total products supplied	18,414	17,080	7.8	17,921	17,329	3.4
Supply:						
Domestic production:						
Crude oil[6]	8,036	8,397	(4.3)	8,132	8,352	(2.6)
Natural gas liquids	1,614	1,637	(1.4)	1,610	1,593	1.1
Other supply[7]	657	811	(19.0)	1,034	841	22.9
Total domestic supply	10,307	10,845	(5.0)	10,776	10,786	(0.1)
Imports:						
Crude oil, total	5,299[10/]	4,916[10/]	7.8	4,989[10/]	4,604[10/]	8.4
Canadian	705	574	22.8	685	610	12.3
Other	4,594	4,342	5.8	4,304	3,994	7.8
Products, total	2,655	2,055	29.2	2,127	1,986	7.1
Residual fuel oil	729	568	28.3	564	557	1.3
Other	1,926	1,487	29.5	1,563	1,429	9.4
Total imports	7,954	6,971	14.1	7,116	6,590	8.0
Total supply	18,261	17,816	2.5	17,892	17,376	3.0
Stock change, all oils	- 153	+ 736	XXXX	- 29	+ 47	XXXX
Refinery Operations						
Input to crude oil distillation units	13,240	13,074	1.3	13,417	12,968	3.5
Operable capacity	15,922	15,888	0.2	15,916	15,615	1.9
Refinery utilization (%)[8]	83.2%	82.3%	1.1	84.3%	83.0%	1.6
Crude oil runs	13,089	12,981	0.8	13,264	12,821	3.5

Stocks (millions bbls.)	1988		1987[2]	% Change from ...	
	Nov. 30[9]	Oct. 31[9]	Nov. 30	Previous Month	Year Ago
Crude oil [10/]	338.1	336.7	363.6	0.4	(7.0)
Unfinished oils	111.8	109.2r/	101.9	2.4	9.7
Total motor gasoline**	219.1	214.1r/	225.2	2.3	(2.7)
Finished leaded motor gasoline*	38.4	38.2	53.5	0.5	(28.2)
Finished unleaded motor gasoline*	143.4	139.1r/	134.6	3.1	6.5
Naphtha-jet	6.6	6.5r/	7.0	1.5	(5.7)
Kerosine-jet	38.6	41.2	43.9	(6.3)	(12.1)
Distillate fuel oil	128.7	128.4	128.0	0.2	0.5
Residual fuel oil	42.5	40.6	50.0	4.7	(15.0)
All other oils	171.9	185.2r/	176.8	(7.2)	(2.8)
Total all oils	1,057.3	1,061.9r/	1,096.4	(0.4)	(3.6)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-September, U.S. Department of Energy, October-November, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

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JANUARY 18, 1989

DECEMBER 1988

SUMMARY

With the past year's developments, a pattern is becoming increasingly evident as, for the third year in a row, U.S. production fell and consumption and imports continued to rise:

- Domestic production continued to decline in an environment of crude oil prices which had trended downward for much of the year. As a result of substantially lower drilling rates and reduced servicing of existing wells during the past three years, 1988's production by year-end had fallen to a level more than 1 million B/D lower than only three years ago.
- Partly because of the unexpected strength in the economy, petroleum deliveries rose more than most analysts had predicted, reaching the highest level since 1979. Nevertheless, according to preliminary estimates, petroleum's share of total energy consumption declined slightly for the second year in a row. Total energy consumption is estimated to have risen to the highest level ever—though it would have been roughly 25 percent higher without the conservation and efficiency gains of the past ten years.
- Rising usage and decreasing domestic supplies resulted in another increase in imports, also to the highest level since 1979. At 7.2 million B/D, 1988's imports have risen by more than 2 million B/D, or 45 percent, over the past three years.

All major products contributed to the year's 3.2 percent increase in deliveries, which exceeded many analysts' forecasts in part because of economic growth substantially stronger than the 2 to 3 percent originally anticipated for the year. Even though the year's deliveries reached a new recent-year high, fuel switching, particularly away from residual fuel oil, has significantly reduced overall petroleum consumption over the last ten years. Total deliveries in 1988 would have matched 1978's historical peak of 18.9 million B/D without the 1.7 million B/D decline in residual fuel oil consumption since that year.

By product category, gasoline's increase for the past year, at 1.6 percent, was the smallest, continuing the trend of declining rates of growth for gasoline that has been evident over the past three years. In fact, only a third of the increase in total deliveries over the past three years and about one fifth of 1988's increase is attributable to gasoline, though this product accounts for about 43 percent of domestic deliveries. Winter weather colder than in 1987 helped to boost distillate deliveries' increase to nearly 4 percent, compared with rates of about 2 percent or less in recent previous years; residual fuel oil recovered from 1987's decline with a 5.2 percent increase.

Kerosine jet fuel's 5.2 percent growth, though continuing to slow from the 10 percent increase of two years ago, was still one of the largest increases among the major products. Deliveries of "other oils" continued to grow as well, though less rapidly than in the previous year.

The level of crude oil prices, which before the OPEC production agreement late in the year had fallen by about one third since mid-1987, continued to discourage drilling and other upstream activity. As a result, a 60 thousand B/D increase in Alaskan crude oil production was more than offset by an annual average decline of nearly 300 thousand B/D for the rest of the U.S. The decline trend in lower 48 production accelerated in 1988, and is now estimated to be running at about 400 thousand B/D per year, compared with a decline trend of approximately 240 thousand B/D per year in 1987.

In response to the year's increased deliveries, refineries operated at some of the highest levels since the 1970s, averaging 84.3 percent of operable capacity. If only capacity in actual operation is counted, the utilization rate for the year would have been nearly 90 percent, only slightly less than the high, 92 percent level set in 1977. After the inventory buildup earlier in the year and the destocking pattern during much of the second half, total stocks ended the year only slightly down from the prior December.

Note: For layout purposes, the graphs of monthly data which normally appear with the text have been moved to the end of this month's Report.

API ESTIMATES

	DECEMBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	18.5	6.0	17.2	3.2
Crude oil production[2/]	7.9	(4.9)	8.1	(2.9)
Total imports[3/]	8.0	18.2	7.2	8.9
Stocks (million bbl)[3/]	1,045	(2.0)	na	na

PRODUCT SUPPLIED [1/]

Energy

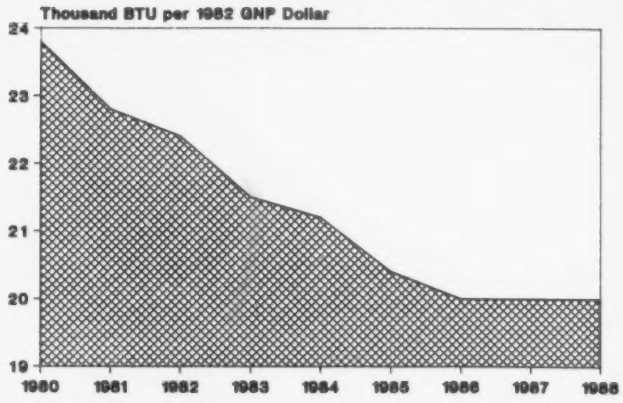
GROWTH FOR MOST FUELS PUSHES ENERGY TO NEW HIGH. Total energy use is estimated to have risen more than 4 percent in 1988, following 1987's healthy 3.5 percent rise. This puts total energy use at over 80 quads, surpassing the previous high of 78.9 quads reached in 1979. Much of 1988's larger increase was likely due to the one-time effects of leap year and weather extremes, in addition to strong economic growth. However, stronger energy growth in the past two years still contrasts with the earlier portion of the decade, when energy consumption had been trending slightly downwards.

According to preliminary estimates, strong growth in the consumption of non-petroleum fuels resulted in a slight decline in petroleum's share of total energy in 1988. Petroleum's declining share of the past two years has continued to erode 1986's price-related gain, which had been the first in nearly a decade. While its share had reached nearly 49 percent in 1977, 1988's share is estimated at a little more than 42 percent.

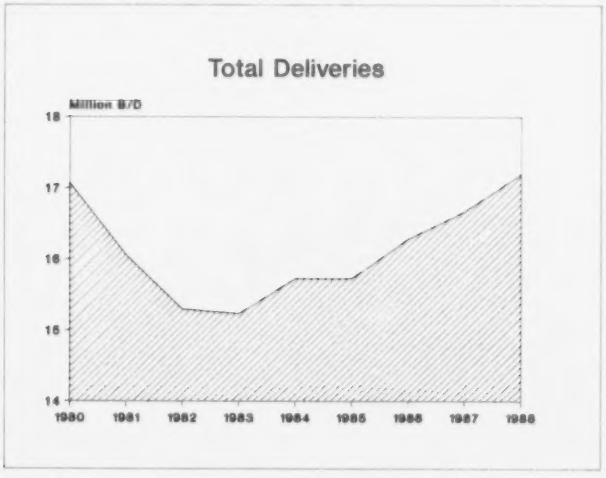
Two thirds of the increase in energy use was attributable to increases for fuels other than petroleum. Growth in electricity generation of nearly 5 percent gave a boost to coal consumption, while weather extremes and increased industrial use raised natural gas deliveries. Even so, natural gas' share fell short of coal's for the third year in a row. The coming on line of several additional plants, along with higher utilization, increased energy supplied from the nuclear power sector; hydropower generation, however, reflecting unfavorable weather, declined for the fifth year in a row.

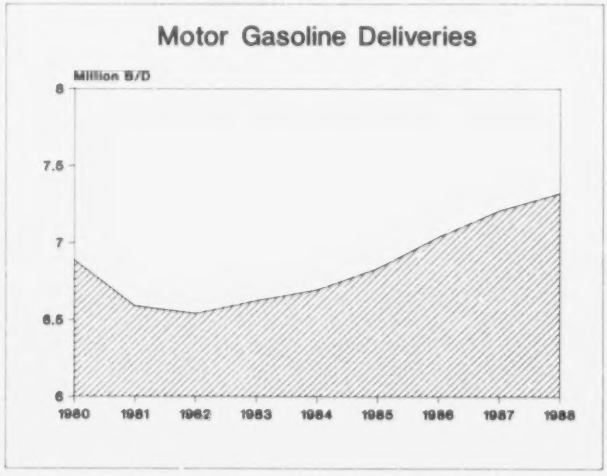
According to our estimates, energy efficiency, at least on the surface, might appear to have remained static in 1988, as it had in 1987 following the previous year's dramatic oil price decline. However, leap-year effects and weather extremes during the past year both pushed up energy use relative to GNP. Thus, the figures, once adjusted for these anomalies, actually suggest a

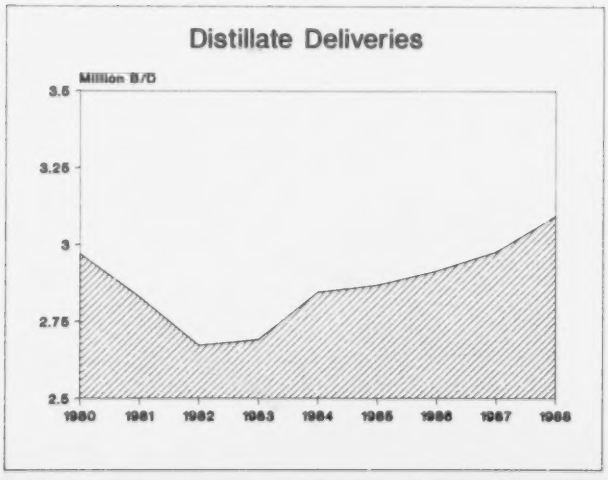
Energy Consumed Per Dollar of Real GNP

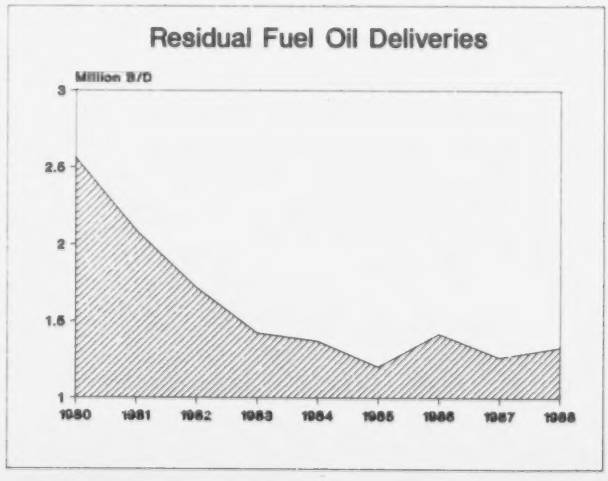


Sources: Department of Energy, Department of Commerce, API estimates.









small improvement in underlying energy efficiency for 1988.

Though this conclusion is preliminary and subject to the inherent variability of estimated data, it is to be expected that some continued improvement in energy efficiency would be taking place. This is because energy-using equipment such as vehicles, buildings, and industrial equipment continue to be replaced with more efficient models—equipment that has benefited from technological gains inspired by higher energy costs in the 1970s and early 1980s.

The net gain in energy efficiency over the past ten years has been impressive. Without the improvement in energy consumption per unit of economic output over the past ten years, domestic energy use would currently be roughly 25 percent higher; and without the shift away from oil to other fuels, the combined effect would mean that the U.S. would be consuming over 40 percent more petroleum than at present—and imports would be fully double their current level. The improvement in efficiency over the past year or two, however, has been much less than the average of nearly 3 percent per year experienced for 1978-1986.

Gasoline

GROWTH RATE SLOWS IN 1988. Gasoline deliveries continued to rise in 1988, though the rate of growth has been steadily declining over the past several years. Deliveries had jumped 3 percent in 1986, in part a response to retail prices which had fallen by nearly one fourth; growth in 1987 receded to 2.4 percent, and in 1988 slipped to 1.6 percent. Because of this slowing in deliveries growth, gasoline accounted for only a fifth of 1988's total deliveries increase and a third of that of the past three years. This was true even though gasoline's share of deliveries is roughly 43 percent.

Though the rate of growth appears to have slowed, 1988's increase still brought gasoline deliveries to within about 3 percent of 1978's historical high. The similarity in consumption levels, however, contrasts with the substantial increases in the vehicle population and travel over the decade. As one measure of the progress in fuel efficiency over the past ten years, the number of gasoline-powered vehicles on the highways has risen by more than 20 percent and travel has increased by nearly 30 percent.

Furthermore, despite more rapid economic growth, gasoline deliveries have increased less rapidly in the past six years than they did for most of the 1970s. The increase in deliveries, 1970-1978, averaged nearly 3.5 percent per year, compared with about 2 percent per year, 1982-1988. Meanwhile, growth in the economy rose from 3.2 percent per year in the earlier period to about 4 percent for the most recent six years.

Unleaded continued to gain market share in 1988, and by year-end accounted for all but 15 percent of gasoline deliveries. For the past two years, unleaded's penetration rate of 6 to 7 percentage points per year has exceeded the 4 to 5 point gains of earlier years as midgrade unleaded has continued to replace leaded regular on a supplier-by-supplier and market-by-market basis. A clearer picture of the midgrade situation may begin to take shape when the Department of Energy begins publishing data on midgrade unleaded sometime in 1989.

TABLE 1
ESTIMATED ENERGY CONSUMPTION AND SHARES BY TYPE

Consumption (Quadrillion BTU Annually)

	Coal	Natural Gas	Petroleum	Other	Total
1987	18.0	17.7	32.9	8.2	76.8
1988	18.9	18.6	34.0	8.6	80.1
Change	+ 0.9	+ 0.9	+ 1.1	+ 0.4	+ 3.3
Percent change	+ 4.7%	+ 5.5%	+ 3.5%	+ 4.6%	+ 4.4%

Market Shares (Percent)

1987	23.5	23.0	42.8	10.7	100.0
1988	23.5	23.3	42.4	10.8	100.0
Percentage point change in share	—	+ 0.3	− 0.4	+ 0.1	

Note: Figures rounded independently; calculations based on unrounded data. Because 1988 was a leap year, the percentage change for petroleum on an annual basis differs from that computed on a daily basis.

Sources: Department of Energy, API estimates.

TABLE 2

ESTIMATED DISTILLATE DELIVERIES BY SECTOR
(Thousand B/D)

	1987	1988	Percent Change
Residential and commercial	764	794	+ 3.9%
Farm	211	200	− 5.2
Industrial and oil company	248	260	+ 4.8
On-highway	1,185	1,245	+ 5.1
Railroad	205	210	+ 2.4
Other	364	384	+ 5.5
Total	2,977	3,093	+ 3.9%

Sources: Department of Energy, API estimates.

Distillates

WEATHER, ECONOMIC GROWTH CONTRIBUTE TO STRONG INCREASE. Distillate deliveries increased 3.9 percent in 1988, contrasting with the roughly 1 to 2 percent increases of the previous three years. Part of the larger increase was due to winter weather colder than in 1987 for both the first and fourth quarters which added an estimated 25 thousand B/D to the year's heating oil deliveries compared with the previous year.

The colder winter weather, combined with one of the hottest summers on record, increased electric utility use of distillate in peaking units to meet high electricity demand, though utility

use for the year as a whole is estimated to be up only about 10 thousand B/D. The drought, however, is estimated to have cut farm usage to some extent for the year.

In line with the trends of the last several years, the largest single contributor to distillate deliveries' increase has continued to be the transportation sector, particularly highway use. The strong economy—manufacturers' shipments rose roughly 9 percent for the year (unadjusted for inflation)—is estimated to have raised on-highway diesel usage by about 5 percent, or 60 thousand B/D, with an additional 5-10 thousand B/D from increased railroad consumption. Increased economic activity also contributed to the growth in industrial usage.

The on-highway sector's share of the distillate market appears to have stabilized over the past few years. On-highway diesel's rapid growth during the first half of the decade had translated into an increase in market share from 30 percent in 1980 to almost 40 percent in 1985. Since that time, its share has remained at about 40 percent as deliveries to other sectors, as a group, grew at about the same rate.

Residual Fuel Oil

1987's DECLINE REVERSED IN 1988. Deliveries of residual fuel oil for 1988 were estimated to be 1,330 thousand B/D, an increase of 5.2 percent from last year, substantially outpacing the rise in deliveries of total petroleum products for the year. Despite increased deliveries to most major end-use sectors, deliveries are still less than the levels reached in 1986, when prices fell substantially.

Reversing much of the previous year's slide, deliveries of heavy fuel oil to electric utilities are believed to have risen by 8 percent in 1988, accounting for more than half of the total increase in residual fuel oil deliveries. Deliveries to this sector are reported to have been bolstered by the decline in oil prices earlier in the year as well as the drought-related decline in hydroelectric power generation. Although some of the increase is the result of increases in the direct consumption of heavy oil, part of the increase in actual deliveries is believed to have resulted from a recent but substantial increase in stocks held by utilities.

For the year, bunker fuels deliveries are estimated to have risen 6.4 percent. This reflects continued increases in export activity as a result of the continuing decline in the value of the dollar. Much of the rise in the deliveries of bunker fuels is believed to have taken place during the first half of the year. More recently, other bunkering locations, such as Rotterdam, are believed to have been more competitive as sources of bunker fuel, limiting the increase in domestic bunker fuel deliveries.

TABLE 3

ESTIMATED RESIDUAL FUEL OIL DELIVERIES BY SECTOR
(Thousand B/D)

	1987	1988	Percent Change
Utilities	498	538	+ 8.0%
Bunkering	343	365	+ 6.4
Industrial and oil company	282	285	+ 1.1
Commercial	115	122	+ 6.0
Other	26	20	- 23.1
Total	1,264	1,330	+ 5.2%

Sources: Department of Energy, API estimates.

Commercial and industrial deliveries are also estimated to have risen, but these increases were more moderate. Although lower prices were believed to have stimulated deliveries for the year, other fuels, especially natural gas, were believed to have substantially limited penetration by residual fuel oil to those sectors. During the summer, for example, unusually low-priced gas displaced substantial portions of heavy fuel oil in both sectors.

Kerosine Jet Fuel

SLOWER GROWTH PARALLELS TRAFFIC. With the growth in air traffic slowing over the past two years, yearly increases in kerosine jet fuel deliveries have been lessening as well. After rising 10 percent in 1986 and nearly 7 percent in 1987, the past year's increase in deliveries of 5.2 percent was the smallest for kerosine jet fuel in six years—but still one of the largest increases for any major product in 1988.

As a result of this slower growth—and residual fuel oil's reversal of its 1987 decline—the rapid progress that kerosine jet fuel had been making towards replacing residual fuel oil as the third largest product, in terms of deliveries, was stalled in 1988. Even so, in the past five years, kerosine jet fuel deliveries have risen by almost 50 percent, paralleling increases in air traffic, while residual fuel oil deliveries have experienced a net decline of about 6 percent. The past year's deliveries of kerosine jet fuel, at 1.2 million B/D, where within less than 100 thousand B/D of those of residual fuel oil.

The slower growth in kerosine jet fuel deliveries in 1988 reflects developments in air traffic. Miles flown in the past year are estimated to be up about 4 percent, contrasting with increases of 12 percent in 1986 and 8 percent in 1987. Most of the year's increased traffic came from strong growth in international passenger travel and substantial increases in cargo traffic, both up roughly 15 percent for the year. Domestic revenue passenger miles, by contrast, are estimated to have risen only about 1 percent for the year.

Other Oils

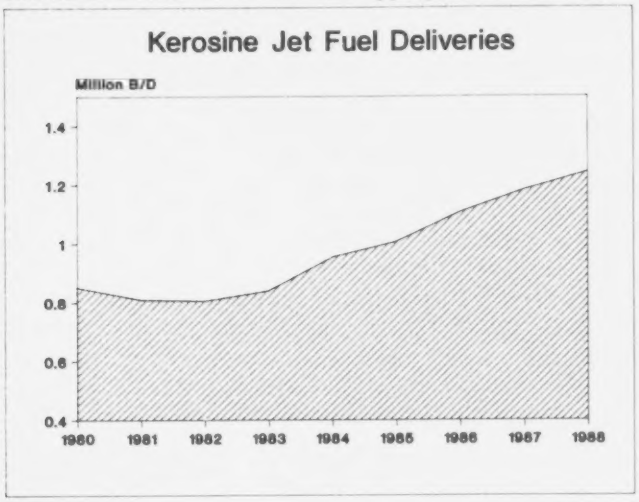
DELIVERIES RISE, BUT LESS THAN IN PRIOR YEAR. Deliveries of other oils for 1988 were estimated to have averaged 4,175 thousand B/D, an increase of 2.6 percent over the 1987 estimate of 4,071 thousand B/D. This is approximately half of the previous year-to-year increase in other oils' deliveries.

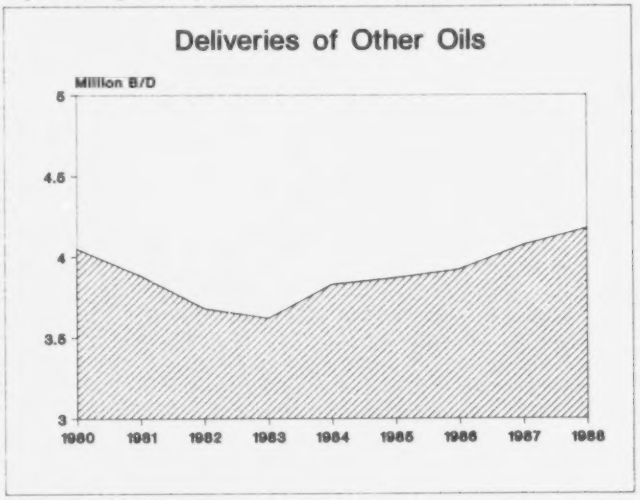
The moderation of the rate of growth of other oils for the year reflects several factors. The most important of these was the sharp slowdown in the year-to-year increase in petrochemical feedstock deliveries to a rate of approximately 1 percent. Within that category, however, there was a substantial shift in feedstock preference, resulting in greater deliveries for lighter products, especially ethane and butane. Propane, however, was believed to have declined slightly. At the heavier end, naphtha deliveries were likely to have been similar to those of last year, but gasoil deliveries were believed to have declined substantially, offsetting much of the increase in deliveries of lighter feedstocks.

Asphalt and road oil deliveries for 1988 were believed to have registered only a 1 percent increase. Unusually cold and wet weather is believed to have slowed deliveries of the product

during the first half of the year. In addition, delays in federal and state appropriations resulted in additional slowdowns in road building and maintenance during the middle of the year. Towards the end of the year, such activity is believed to have increased as a result of the eventual appropriation of funds as well as favorable weather conditions, accounting for much of the year-to-year increase in product delivery.

In December, deliveries of other oils were estimated to be 4,440 thousand B/D, slightly higher than November but representing a 6.7 percent increase from December 1987.





SUPPLY[1/]

Production

DECLINE RATE ACCELERATES IN LOWER 48.

Domestic crude oil production declined for the third year in a row in 1988 to 8.1 million B/D; a similar level has not been experienced since 1976, the year before production began at Alaska's Prudhoe Bay. By the end of 1988, production had fallen by more than 1 million B/D since early 1986.

The lower crude oil prices of the past three years have substantially reduced the level of upstream activity, which in turn has been reflected in production levels. Based on data for the first three quarters, well completions in 1988 are believed to have averaged only about half those in 1985. Oil well completions alone have likely fallen by roughly 60 percent in three years, with natural gas completions declining by about 35 percent.

Well servicing activity, though showing some recovery during the first part of the year, reversed direction as crude oil prices headed downwards, averaging about 30 percent lower than in 1985 for the year as a whole. Responding to the reduced upstream activity, employment in oil and gas extraction fell about 10 percent in 1988 to about the 420,000 level, 30 percent less than three years earlier.

As a result of these developments, the decline trend in lower 48 crude oil production accelerated in 1988. With the inclusion of December's data and revised data for earlier months, the rate of decline is now estimated at about 400 thousand B/D per year—compared with about 240 thousand B/D per year during 1987. For the year, lower 48 production fell to 6.1 million B/D, the lowest level since 1950.

Alaskan production increased by about 60 thousand B/D due to additional production from the Endicott field, which came on stream late in 1987. Because of the lower 48's continued declines and projects in Alaska which have come into production in the past several years after long periods of exploration and development work, that state's production now accounts for one fourth of U.S. crude oil output.

Imports

IMPORTS RISE TO HIGHEST ANNUAL LEVEL SINCE 1979.

Imports, rising nearly 600 thousand B/D in 1988 to 7.2 million B/D, reached the highest annual level since 1979 as a result of the year's increased deliveries and reduced crude oil production. After reaching an all-time high in 1977 of 8.8 million B/D, imports declined or held steady through the first half of the 1980s. However, since 1986, as lower oil prices encouraged consumption and discouraged production, imports have risen by more than 2 million B/D.

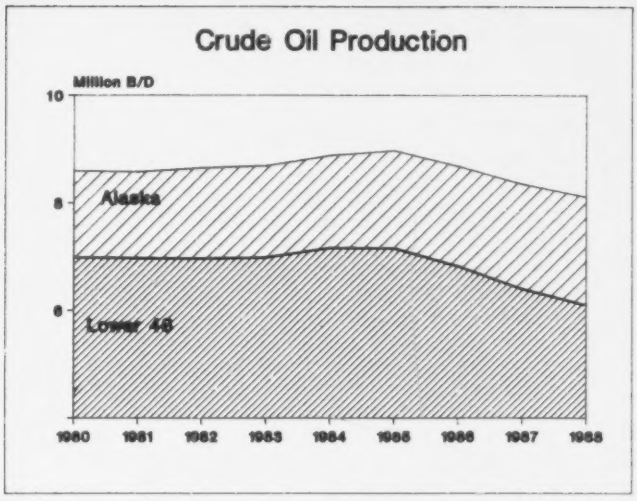
Though at year end, imports were exceeding the level of domestic crude oil production, steady output of natural gas liquids—averaging 1.6 million B/D—and other smaller domestic supply components kept the supply balance tipped towards the domestic side. Nevertheless, 1988's gross imports still accounted for about 42 percent of domestic consumption—up from 31 percent only three years ago. Of that three-year increase, about four fifths has come from OPEC producers and the bulk of that from the Middle East, reflecting the geographic distribution of worldwide incremental production capacity.

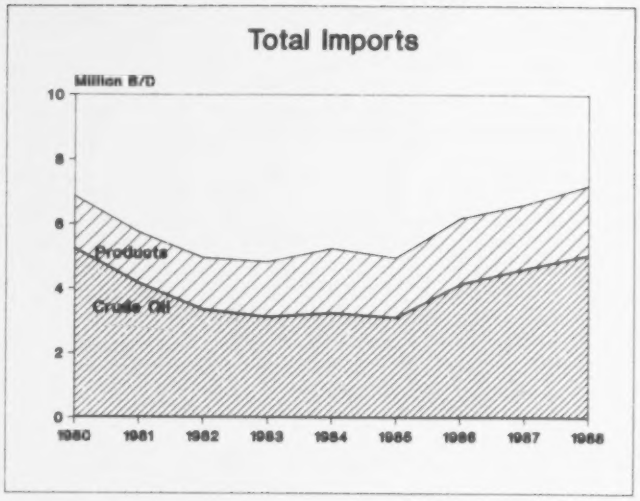
Nearly three fourths of the increase in imports in 1988 was in the form of crude oil, but product imports rose as well. Imports of gasoline and components, though up only 15 thousand B/D on average for the year, rose to the highest level ever. Distillate imports were up 25 thousand B/D, the third annual increase in a row. Because of strong imports towards the end of the year as deliveries began to increase significantly, imports of residual fuel oil rose 28 thousand B/D for the year as a whole.

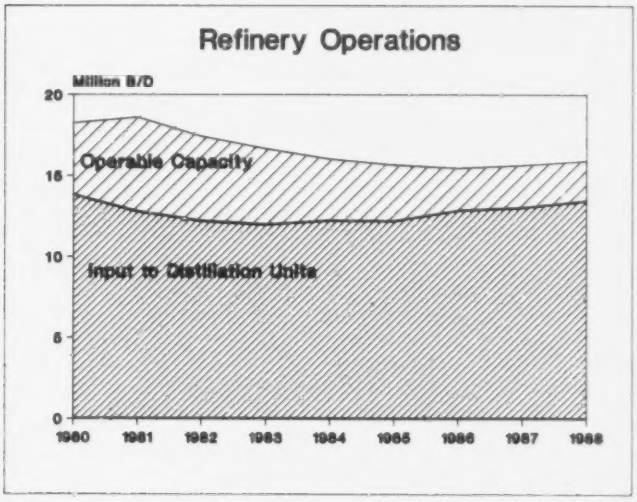
Refinery Operations

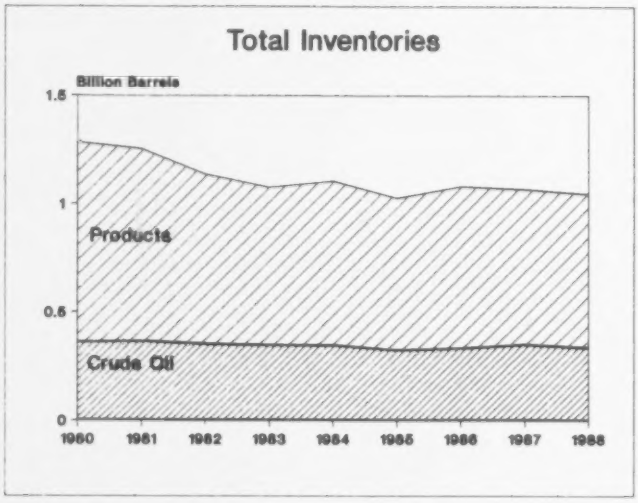
UTILIZATION HIGH IN 1988.

For many years in the early 1980s, the lower demand brought about by higher oil prices led to reduced refinery runs and annual utilization rates of as low as 69 percent. The growth in deliveries over the last









several years, however, has resulted in a corresponding increase in refinery operations. Since 1985, input to distillation units has risen nearly 1.3 million B/D, leading to an average utilization rate in 1988 of 84.3 percent of operable capacity.

This rate rises to nearly 90 percent if calculated on the basis of capacity in actual operation, and is within a few points of the unusually high, 92 percent level reached in 1977. Neither of these utilization rates take into account downstream units such as those used in the production of gasoline or other products. Although refiners have continued to upgrade downstream capacity, utilization for these units is reported to have been extremely high during the past year as well.

Increases in product output in 1988 roughly reflected the pattern in deliveries growth among the various products. Gasoline production rose 1.5 percent for the year to more than 6.9 million B/D, the highest level in a decade. Distillate production increased 4.7 percent and residual fuel oil, 4.4 percent.

Inventories

TOTAL STOCKS DOWN SLIGHTLY YEAR-TO-YEAR.

Stocks fell 24 million barrels in December, about average for the month. This contrasts with the above-average destocking pattern that had existed for much of the second half, despite the high level of imports. Even so, inventories at year-end were only 2 percent below the year-earlier level.

Gasoline stocks' increase in December of 10 million barrels was greater than normal. However, the increase brought gasoline stocks at the end of the year up to a level more in line with recent-year inventories for December than has been the case in recent months. Distillate inventories declined 2 million barrels, about average for the month, though year-end levels were down 7 million barrels compared with one year earlier.

1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 560 million barrels as of December 31, 1988).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	DECEMBER			YEAR-TO-DATE		
	1988[1]	1987[2]	% Change	1988[3R]	1987[2]	% Change
Products Supplied:						
Total motor gasoline	7,366	7,251	1.6	7,320	7,206	1.6
Finished leaded motor gasoline*	1,077	1,537	(29.9)	1,331	1,736	(23.3)
Finished unleaded motor gasoline*	6,289	5,714	10.1	5,989	5,470	9.5
Naphtha-jet	213	175	21.7	211	204	3.4
Kerosine-jet	1,378	1,288	7.0	1,243	1,181	5.2
Distillate fuel oil	3,445	3,318	3.8	3,093	2,977	3.9
Residual fuel oil	1,815	1,434	26.6	1,330	1,264	5.2
All other oils[4]	4,440	4,163	6.7	4,175	4,071	2.6
Reclassified[5]	- 172	- 184	(6.5)	- 174	- 238	(26.9)
Total domestic products supplied	18,485	17,445	6.0	17,198	16,665	3.2
Exports	707	1,057	(33.1)	796	764	4.2
Total products supplied	19,192	18,502	3.7	17,994	17,429	3.2
Supply:						
Domestic production:						
Crude oil[6]	7,909	8,318	(4.9)	8,111	8,349	(2.9)
Natural gas liquids	1,684	1,621	3.9	1,621	1,595	1.6
Other supply[7]	843	843	-	1,010	841	20.1
Total domestic supply	10,436	10,782	(3.2)	10,742	10,785	(0.4)
Imports:						
Crude oil, total	5,302[10/]	4,572[10/]	16.0	5,034[10/]	4,601[10/]	9.4
Canadian	673	585	15.0	677	608	11.3
Other	4,629	3,987	16.1	4,357	3,993	9.1
Products, total	2,694	2,194	22.8	2,158	2,004	7.7
Residual fuel oil	981	650	50.9	593	565	5.0
Other	1,713	1,544	10.9	1,565	1,439	8.8
Total imports	7,996	6,766	18.2	7,192	6,605	8.9
Total supply	18,432	17,548	5.0	17,934	17,390	3.1
Stock change, all oils	- 760	- 954	XXXX	- 60	- 39	XXXX
Refinery Operations						
Input to crude oil distillation units	13,452	13,383	0.5	13,427	13,003	3.3
Operable capacity	15,922	15,946	(0.2)	15,919	15,643	1.8
Refinery utilization (%)[8]	84.5%	83.9%	0.7	84.3%	83.1%	1.4
Crude oil runs	13,358	13,212	1.1	13,281	12,854	3.3

Stocks (millions bbls.)	1988		1987[2]	% Change from . . .	
	Dec. 31[9]	Nov. 30[9]	Dec. 31	Previous Month	Year Ago
Crude oil 10/	332.8	338.5r/	349.0	(1.7)	(4.6)
Unfinished oils	98.8	111.7r/	93.2	(11.5)	6.0
Total motor gasoline**	228.8	219.2r/	226.2	4.4	1.1
Finished leaded motor gasoline*	40.7	38.4	53.1	6.0	(23.4)
Finished unleaded motor gasoline*	148.9	143.5r/	135.7	3.8	9.7
Naphtha-jet	6.3	6.6	8.0	(4.5)	(21.2)
Kerosine-jet	37.6	38.6	42.0	(2.6)	(10.5)
Distillate fuel oil	127.0	128.7	134.5	(1.3)	(5.6)
Residual fuel oil	44.4	42.5	47.4	4.5	(6.3)
All other oils	169.4	182.8r/	166.5	(7.3)	1.7
Total all oils	1,045.1	1,068.6r/	1,066.8	(2.2)	(2.0)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-October, U.S. Department of Energy, November-December, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

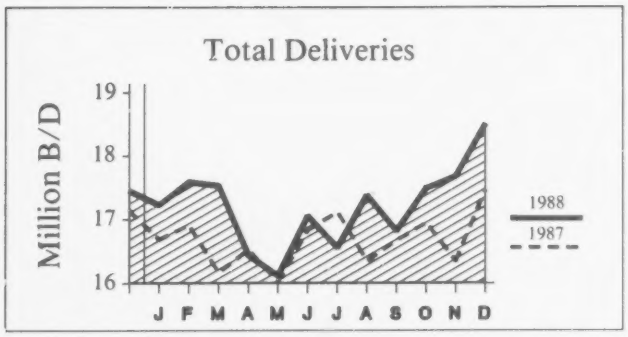
ESTIMATED UNITED STATES PETROLEUM BALANCE

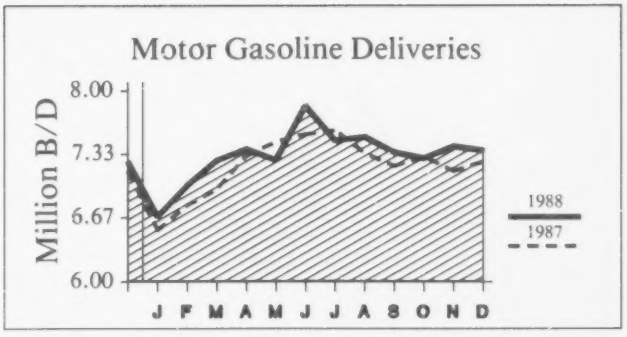
(Daily Average in Thousands of 42 Gallon Barrels)

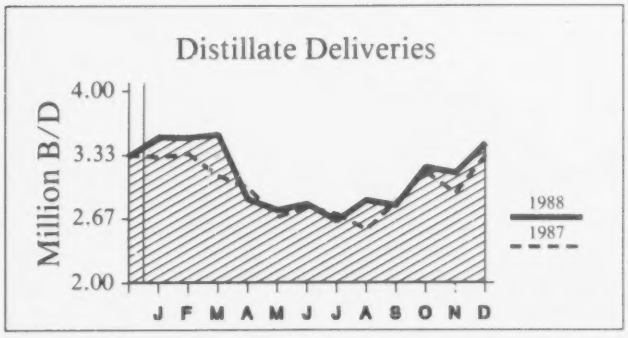
Products Supplied/Supply From Primary Storage	4th QUARTER		
	1988[1]	1987[2]	% Change
Products Supplied:			
Total motor gasoline	7,355	7,237	1.6
Finished leaded motor gasoline*	1,173	1,590	(26.2)
Finished unleaded motor gasoline*	6,182	5,647	9.5
Naphtha-jet	216	200	8.0
Kerosine-jet	1,310	1,231	6.4
Distillate fuel oil	3,266	3,136	4.1
Residual fuel oil	1,496	1,236	21.0
All other oils[3]	4,432	4,147	6.9
Reclassified[4]	- 179	- 270	(33.7)
Total domestic products supplied	17,896	16,917	5.8
Exports	730	814	(10.3)
Total products supplied	18,626	17,731	5.0
Supply:			
Domestic production:			
Crude oil[5]	7,982	8,359	(4.5)
Natural gas liquids	1,655	1,620	2.2
Other supply[6]	826	782	5.6
Total domestic supply	10,463	10,761	(2.8)
Imports:			
Crude oil, total	5,371[9/]	4,857[9/]	10.6
Canadian	658	599	9.8
Other	4,713	4,258	10.7
Products, total	2,491	2,058	21.0
Residual fuel oil	744	544	36.8
Other	1,747	1,514	15.4
Total imports	7,862	6,915	13.7
Total supply	18,325	17,676	3.7
Stock change, all oils	- 301	- 55	XXXX
Refinery Operations			
Input to crude oil distillation units	13,337	13,118	1.7
Operable capacity	15,929	15,808	0.8
Refinery utilization (%)[7]	83.7%	83.0%	0.8
Crude oil runs	13,213	12,975	1.8

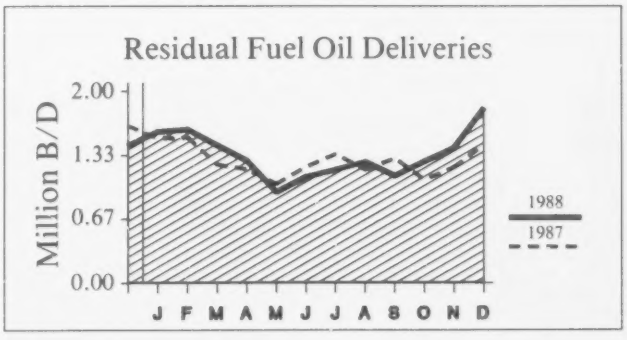
Stocks (millions bbls.)	4th QUARTER		
	1988[8]	1987[2]	% Change
Crude oil	332.8[9/]	349.0[9/]	(4.6)
Unfinished oils	98.8	93.2	6.0
Total motor gasoline**	228.8	226.2	1.1
Finished leaded motor gasoline*	40.7	53.1	(23.4)
Finished unleaded motor gasoline*	148.9	135.7	9.7
Naphtha-jet	6.3	8.0	(21.2)
Kerosine-jet	37.6	42.0	(10.5)
Distillate fuel oil	127.0	134.5	(5.6)
Residual fuel oil	44.4	47.4	(6.3)
All other oils	169.4	166.5	1.7
Total all oils	1,045.1	1,066.8	(2.0)

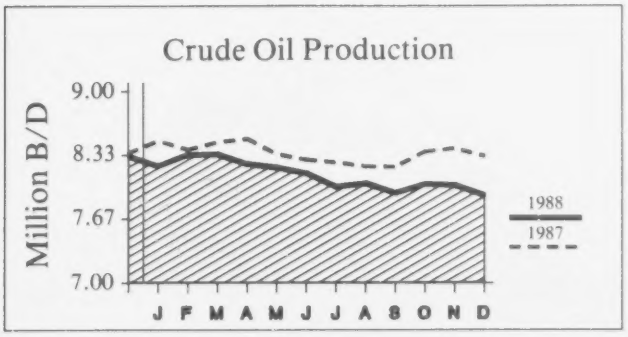
1/ Source: U.S. Department of Energy, October; November-December, API.
2/ Source: U.S. Department of Energy.
3/ Includes crude losses.
4/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
5/ Includes lease condensate.
6/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
7/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
8/ Derived by interpolating API weekly stocks data.
9/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

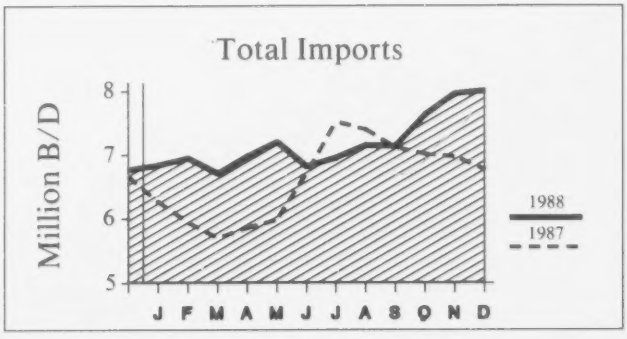

Total Deliveries
Million B/D
19
18
17
16
J F M A M J J A S O N D
1988
1987

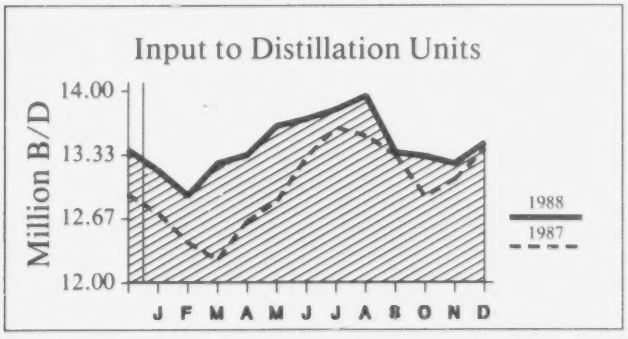

Motor Gasoline Deliveries
Million B/D
8.00
7.33
6.67
6.00
J F M A M J J A S O N D
1988
1987

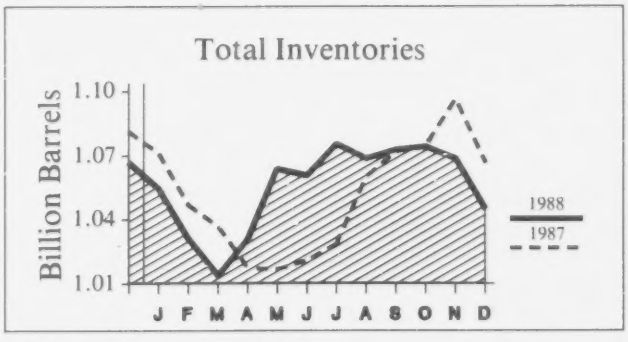

Distillate Deliveries
Million B/D
4.00
3.33
2.67
2.00
J F M A M J J A S O N D
1988
1987


Residual Fuel Oil Deliveries
Million B/D
2.00
1.33
0.67
0.00
J F M A M J J A S O N D
1988
1987


Crude Oil Production
Million B/D
9.00
8.33
7.67
7.00
J F M A M J J A S O N D
1988
1987


Total Imports
Million B/D
8
7
6
5
J F M A M J J A S O N D
1988
1987


Input to Distillation Units
Million B/D
14.00
13.33
12.67
12.00
J F M A M J J A S O N D
1988
1987


Total Inventories
Billion Barrels
1.10
1.07
1.04
1.01
J F M A M J J A S O N D
1988
1987

A2575-2
2/16/89

American Petroleum Institute
1220 L Street, Northwest
Washington, D.C. 20005

Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 1

FEBRUARY 15, 1989

JANUARY 1989

SUMMARY

In January, for the third month in a row, deliveries rose more than 6 percent, year to year. January's 1.1 million B/D increase reflected unusual strength for most products.

In addition to the boost to demand from switching to residual fuel oil in the past several months, it appears that significant volumes may have been moving into nonprimary storage as well. Following November's agreement, perceptions continued to strengthen that OPEC was having some degree of success in reducing its members' production, and this apparently has spurred some distributors and end users to purchase products beyond current needs.

Gasoline's 5.8 percent increase for the month contrasts with last year's average growth of about 1.5 percent; distillate deliveries' growth, at nearly 5 percent, was also strong, considering the extremely warm weather experienced by all but the western-most states during the month. As was the case several times last year, changes in excise tax collection procedures may have also contributed to distillate deliveries' increase.

Residual fuel oil deliveries rose 9 percent for January, while increases for 'other oils' continued in the high, 5 to 6 percent range of recent months. Kerosine jet fuel deliveries were also strong, though because of above-trend deliveries last January, they showed a year-to-year increase of only 3.3 percent.

As in December, Alaska contributed to the U.S. production decline rather than partially offsetting it as it has often done in the last several years. Alaskan production's decline accounted for 42 thousand B/D of the 283 thousand B/D drop in domestic crude oil production.

Imports in January exceeded 8 million B/D for the first time since 1980, but despite the high level of imports, total inventories fell 13 million barrels, similar to the declines for the same month of the previous two years. Product imports accounted for a third of January's 1.4 million B/D year-to-year increase, with higher residual fuel oil imports playing a prominent part in product imports' rise.

Refinery activity was high in January, with utilization at the greatest January level in ten years. The emphasis was on lighter products, and though gasoline production declined seasonally to 7.0 million B/D from December's level of nearly 7.3 million B/D, it still exceeded last January's by 4.7 percent. The high level of refinery activity was reflected in product inventories. Despite the strength in deliveries of both products, gasoline stocks rose 14 million barrels, not out of line with recent experience for the month, while distillate stocks' 9 million barrel decline was below average.

PRODUCT SUPPLIED [1]

Gasoline

GAIN IN USAGE LIKELY LESS THAN FOR DELIVERIES.

January's gasoline deliveries jumped nearly 6 percent, contrasting with last year's annual average growth of about one fourth that size. Though the increase was unusually large, there is little reason to believe that actual consumption increased by this amount. Over the past two years, monthly data for gasoline deliveries have shown year-to-year changes of from roughly −1 to +5 percent, even though underlying consumption trends are estimated to have run in the much narrower range of from 1.5 to 2.5 percent.

Changes in actual consumption can fluctuate because of everything from severe winter weather to holiday effects, but even so, data on vehicle travel vary substantially less than do those for gasoline deliveries. Thus, some of the fluctuations in gasoline deliveries appear to stem not from variations in consumption but from changes in nonprimary inventories, which are not measured by either API or the Department of Energy. Because of the developments of the past several months, it is likely that this provides a substantial part of the explanation for January's unusually large increase in deliveries.

Premium unleaded is now estimated to account for about 24 percent of gasoline sales. Although its market share has nearly doubled in the past five years, the market for unleaded gasoline of all types has grown markedly as well, as older, leaded-fuel

API ESTIMATES

	JANUARY	
	Million B/D	Percent Change
Total domestic deliveries	18.3	6.3
Crude oil production[2]	7.9	(3.4)
Total imports[3]	8.2	20.6
Stocks (million bbl)[3]	1,030	(2.3)

vehicles have been retired from the fleet and lead phasedown regulations have led to replacement of leaded regular with midgrade unleaded in many markets. As a percent of unleaded gasoline sales, premium's share has grown less rapidly, rising from about 24 percent in early 1984 to about 28 percent at the end of 1987. Since that time, its share has apparently remained near 28 percent.

Distillates

WARM WEATHER NOT REFLECTED IN DELIVERIES. With this January the warmest in more than 30 years, reduced heating oil consumption would normally be expected to have translated into reduced distillate deliveries. However, despite weather more than 20 percent warmer than last year's colder-than-normal January, distillate deliveries rose 4.7 percent for the month. The warmer weather would have normally reduced the year-to-year increase in deliveries by an estimated 300 thousand B/D, so that January's increase suggests that, just with other products, not all of the month's deliveries reflected end-use consumption.

One additional factor that may have kept deliveries firm in January was the change in tax collection procedures for off-highway users who, until January 1, had to pay federal excise tax up front and then apply for a refund. The shift returned these users' purchases to the tax-free status that had applied before the previous rule change last April 1. The most recent change may have encouraged the shifting of some purchases forward to January to avoid tying up funds in excise tax payments that would otherwise not be required for purchases made after the first of the year. The change last April 1 also had an apparent effect on purchasing patterns, with deliveries in the month before rising nearly 14 percent and deliveries the following month falling 4 percent, year to year.

While transportation and other diesel fuel uses continue to account for distillates' underlying growth, the heating oil sector has been relatively stable. Except for deviations due to weather, demand in the residential and commercial markets, the main heating oil sectors, has remained in the mid-700 thousand B/D range for most of the 1980s.

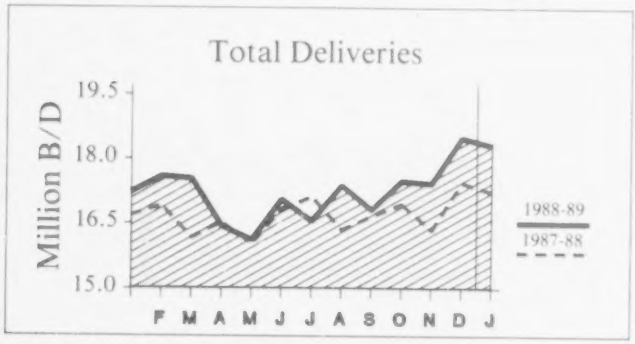
In the Northeast, which accounts for more than half of U.S. heating oil consumption, oil's share of new construction has been edging upwards in the last several years while price-related conversions to other fuels have diminished from the levels of the early 1980s. Even so, the gradual erosion of its market share has continued, with oil heat's one-fourth share of new construction still far short of its more than 40 percent share of the existing housing stock.

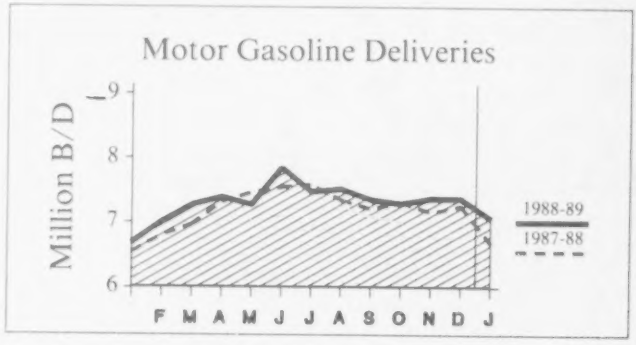
Residual Fuel Oil

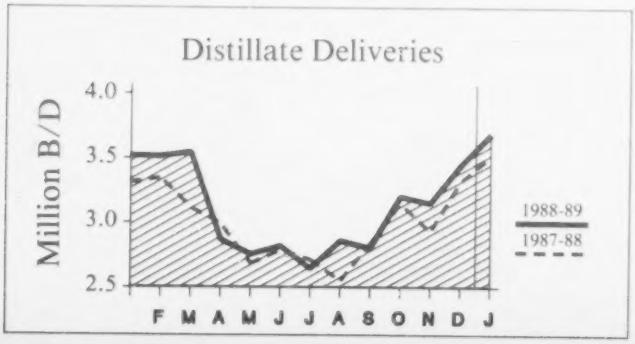
INDUSTRIAL, BUNKER SECTORS CONTRIBUTE TO INCREASE. Deliveries of residual fuel oil in January are estimated to be 1,724 thousand B/D, representing a decline of 5.0 percent from December but an increase of 9.3 percent from January 1988. The substantial month-to-month decrease, which runs counter to the normal seasonal pattern, reflects short-term, weather-related factors affecting deliveries to the electric utility sector; the substantial year-to-year increase, however, represents on-going strength in both the industrial and bunker fuel markets, consistent with observed trends over the last several months.

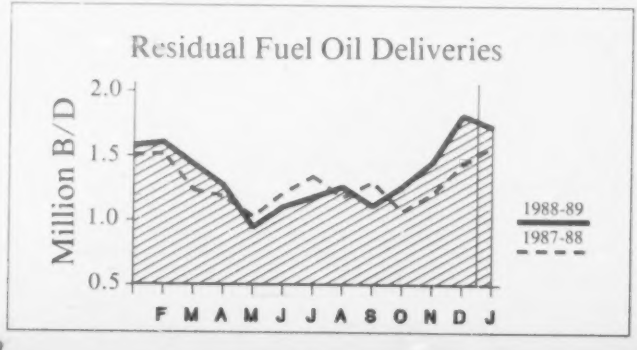
Deliveries to electric utilities during the month are believed to have been weak as a result of the unusually mild weather. Despite this weakness, actual consumption is reported to have declined even more precipitously, resulting in a continuing increase in secondary and tertiary stocks held by utilities. Although the stock increase apparently represents a continuing pattern of accumulation seen during the past several months, it is also believed that the ample supply of fuel in storage has contributed to the current softness in deliveries to this sector.

Deliveries to the industrial sector, however, are believed to









have remained strong. Residual fuel's recent price increase has lagged behind that of crude oil during the recent recovery in oil prices, enabling heavy fuel continue to compete with gas and maintain its share of the industrial market. Bunker fuel markets are also reported to be fairly active in most regions, contributing to the year-to-year growth. The most active trading is reported to have occurred on the East Coast, but other areas are also reported to have maintained recent high levels of activity.

Kerosine Jet Fuel

GROWTH MASKED BY STRONG DELIVERIES A YEAR AGO.

At first, it might seem that kerosine jet fuel's 3.3 percent rise in deliveries over last January broke step with the larger-than-usual increase for most other products; the increase was even less than last year's average growth of about 5 percent. But if account is made for deliveries a year ago that were roughly 100 thousand B/D above trend, this year's increase would be calculated at more than 10 percent.

Underlying consumption growth for the month is probably better represented by trends in air traffic. Although growth in air traffic slowed during much of 1988, more recent data suggest a slight recovery towards the end of the year. Increases in miles flown by the third quarter had slipped to about 3 percent from 8 percent for all of the previous year, but fourth quarter growth appears to have been in the 4 to 5 percent range.

Both domestic and international passenger travel contributed to the uptick. However, domestic growth in miles flown is estimated to have been only 2 to 3 percent compared with international travel growth on the order of 15 percent.

Other Oils

DELIVERIES RISE 6 PERCENT.

Deliveries of other oils for January 1989 are estimated to be 4,475 thousand B/D, representing an increase of 0.8 percent from December 1988 and 6.0 percent from January 1988. Most of the products comprising the other oils category are believed to have contributed to its continued growth. The month-to-month increase, however, is somewhat less than the seasonal norm as a result of the milder-than-average weather for the month, which is believed to have reduced deliveries of propane and kerosine to heating customers.

Petrochemical feedstocks were reported to have sustained high rates of deliveries, continuing the robust trend of the previous year. Record high utilization rates at petrochemical plants, which were reported to have operated with virtually no downtime during the month, are believed to account for much of the sizeable year-to-year increase in other oils deliveries. At the light end, ethane apparently continues to maintain its dominance, resulting in a slight erosion of propane's market share, but demand for ethane appears to be softening as a result of the high level of ethylene stocks that have accumulated during the last several months. Growth in midgrade gasoline demand, however, is believed to have absorbed increased amounts of isobutane as an additive, reducing the availability of that product as a petrochemical feedstock. Naphtha is believed to have maintained its share of the market for heavier feedstocks.

Despite the mild weather, asphalt and road oil deliveries are not believed to have been substantially higher than seasonal norms. Refinery gas production, on the other hand, is estimated to have registered substantial increases.

SUPPLY [1/]

Production

ALASKAN OUTPUT CONTRIBUTES TO YEAR-TO-YEAR DROP.

As in December, Alaska contributed to January's year-to-year decline in crude oil production, rather than partially offsetting it as it usually has during the past several years. Production in Alaska declined 42 thousand B/D from one year earlier, with the fall-off in lower 48 production bringing the decline for the U.S. as a whole to 283 thousand B/D.

Although the year-to-year declines in Alaskan production are not necessarily evidence of a downward trend, production there has stabilized during the past year, with no major new fields or development projects having come on stream during that period. In the previous four years, gains from Alaskan production had added from 40 to 100 thousand B/D to U.S. production levels each year.

Within the lower 48, all regions have shared in the production decline of the past three years, but to varying degrees. In the East and Midwest, which are relatively mature areas with small volumes produced per well, production has declined by more than 20 percent between 1985 and 1988.

In the Gulf Coast area, crude oil output has fallen by 15 percent, with offshore declines roughly proportional to those onshore. Because of the relative size of production in this region, its drop accounted for three fifths of the more than 1 million B/D decline for the combined lower 48 over the period. Production declines of about 12 percent in the Rocky Mountain states and about 9 percent on the West Coast where smaller, but still substantial.

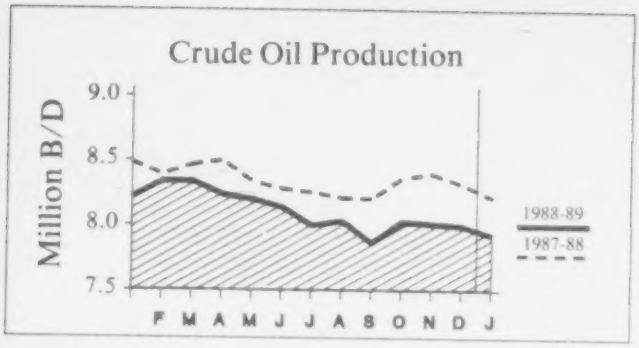
Imports

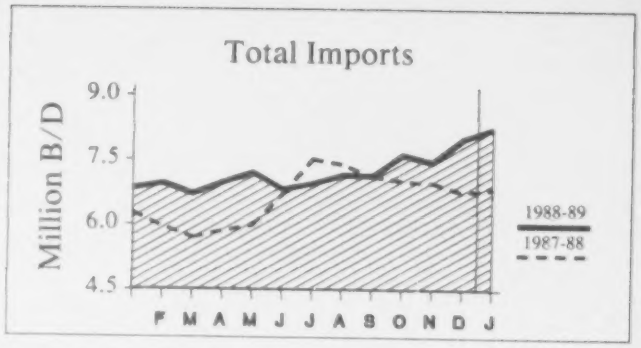
IMPORTS SURPASS 8 MILLION B/D.

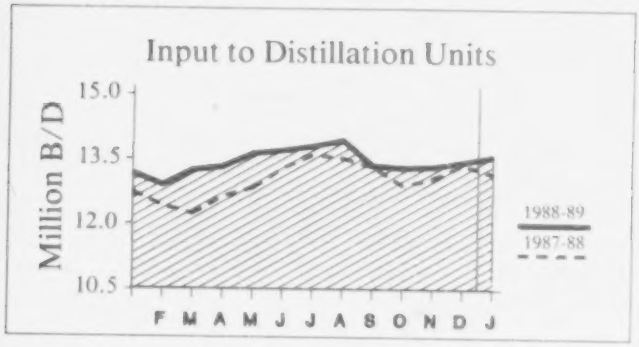
Imports in January exceeded 8 million B/D for the first time since the beginning of the decade. With imports surging ahead by 1 million B/D or more from the levels of only four or five months ago, it might seem that, even with the continuing decline in domestic production and rise in demand, at least part of the increment in imports would end up in inventories. But, at least at the primary level, this was not the case in January because of the month's unusually strong deliveries.

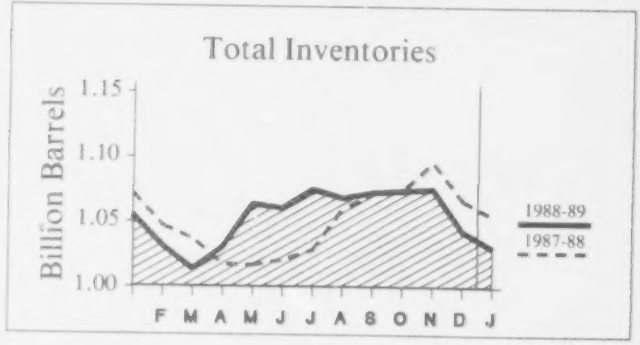
Crude oil imports continued to rise, increasing almost 1 million B/D over last January's below-trend level. The strength in product imports of the last several months also continued in January, with year-to-year increases over the past three months averaging nearly 500 thousand B/D. More than half of this increase has been in the form of residual fuel oil, the surge in demand for this product over the last several months being supplied largely from imports as refineries have concentrated on producing lighter products.

For January alone, a third of the 1.4 million B/D year-to-year increase in total imports was accounted for by products. Of the nearly 450 thousand B/D increase in product imports, about 250 thousand B/D consisted of residual fuel oil, which rose by a third to 956 thousand B/D. Imports of other pro-









ducts were also strong, with imports of gasoline and components rising 93 thousand B/D to 450 thousand B/D and distillate increasing 19 thousand B/D to 374 thousand B/D.

Western hemisphere countries account for a substantial portion of U.S. supplies of foreign gasoline and components, which are imported mainly into the East Coast. Of the 450 thousand B/D imported into the U.S. last year, approximately 175 thousand B/D came from South America and the Caribbean—principally Brazil, Venezuela, and the Virgin Islands, with an additional 50 thousand B/D coming from Canada. European sources accounted for most of the remainder, including about 50 thousand B/D from Rumania.

Refinery Operations

LIGHT PRODUCTS EMPHASIZED. Increases in refinery utilization continued in January, with input to crude oil distillation units rising 3.1 percent over last January. Utilization, averaging 85.4 percent of operable capacity, was the highest for the month since 1979.

With the concentration on lighter products, gasoline production averaged more than 7.0 million B/D. Though down seasonally from December's nearly 7.3 million B/D level, this still amounted to a 4.7 percent increase over the previous January and, as with refinery input, the highest January figure in ten years. Distillate fuel oil production was also high compared with the same month in recent years, rising 2.1 percent from a year ago. But though deliveries of residual fuel oil have risen substantially in recent months, domestic production of residual fuel oil has not; year-to-year changes in the output of this product continue to be mostly negative, with January's decline of 4.8 percent being no exception.

Inventories

DESPITE HIGH IMPORTS, STOCKS FALL. Even though imports set another recent-year record in January, stocks fell 13 million barrels, similar to declines for the same month in the previous two years; month-end stocks were 25 million barrels lower than one year earlier. Imports of crude oil continued to be strong, but the high level of refinery activity actually drew down crude oil stocks slightly.

Despite the strength in gasoline deliveries for January, the high level of refinery operations and emphasis on lighter products increased inventories by 14 million barrels, a seasonal rise not out of line with recent historical experience. At month-end, gasoline stocks were slightly higher than those of last January.

Distillate stocks fell 9 million barrels, a below-average decline for January. The smaller decrease can not be attributed to the unusually warm weather, however, since deliveries were still quite strong; as with gasoline, the smaller decline reflects the strength in refinery activity.

Distillate inventories' decrease put month-end stocks at 118 million barrels. Although this season's primary stocks have been lower than typical for this time of year than in the recent past, evidence indicates that stocks outside the primary system have been higher than usual. Draws on primary inventory have accounted about 3 percent of distillate supplies over October to January, a figure not atypical for the four-month period.

1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 562 million barrels as of January 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	JANUARY			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,064	6,679	5.8			
Finished leaded motor gasoline*	1,095	1,286	(14.9)			
Finished unleaded motor gasoline*	5,969	5,393	10.7			
Naphtha-jet	187	173	8.1			
Kerosine-jet	1,405	1,360	3.3			
Distillate fuel oil	3,683	3,517	4.7			
Residual fuel oil	1,724	1,578	9.3			
All other oils[4]	4,475	4,220	6.0			
Reclassified[5]	- 232	- 303	(23.4)			
Total domestic products supplied	18,306	17,224	6.3			
Exports	729	891	(18.2)			
Total products supplied	19,035	18,115	5.1			
Supply:						
Domestic production:						
Crude oil[6]	7,928	8,211	(3.4)			
Natural gas liquids	1,589	1,569	1.3			
Other supply[7]	863	1,104	(21.8)			
Total domestic supply	10,380	10,884	(4.6)			
Imports:						
Crude oil, total	5,516[10/]	4,552[10/]	21.2			
Canadian	601	635	(5.4)			
Other	4,915	3,917	25.5			
Products, total	2,725	2,281	19.5			
Residual fuel oil	956	737	29.7			
Other	1,769	1,544	14.6			
Total imports	8,241	6,833	20.6			
Total supply	18,621	17,717	5.1			
Stock change, all oils	- 414	- 398	XXXX			
Refinery Operations						
Input to crude oil distillation units	13,577	13,172	3.1			
Operable capacity	15,907	15,911	-			
Refinery utilization (%)[8]	85.4%	82.8%	3.1			
Crude oil runs	13,452	12,975	3.7			

Stocks (millions bbls.)	1989	1988	1988[2]	% Change from ...	
	Jan. 31[9]	Dec. 31[9]	Jan. 31	Previous Month	Year Ago
Crude oil[10/]	330.7	332.9r/	345.5	(0.7)	(4.3)
Unfinished oils	99.9	98.8	95.3	1.1	4.8
Total motor gasoline**	242.7	228.7r/	239.5	6.1	1.3
Finished leaded motor gasoline*	40.2	40.4r/	54.3	(0.5)	(26.0)
Finished unleaded motor gasoline*	160.3	149.1r/	145.8	7.5	9.9
Naphtha-jet	6.5	6.3	8.4	3.2	(22.6)
Kerosine-jet	37.7	37.5r/	37.9	0.5	(0.5)
Distillate fuel oil	118.1	126.8r/	127.2	(6.9)	(7.2)
Residual fuel oil	45.4	44.5r/	46.6	2.0	(2.6)
All other oils	149.3	167.6r/	154.2	(10.9)	(3.2)
Total all oils	1,030.3	1,043.1r/	1,054.6	(1.2)	(2.3)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source:
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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American Petroleum Institute
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Washington, D.C. 20005

Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 2

MARCH 15, 1989

FEBRUARY 1989

SUMMARY

After three months of deliveries growth averaging over 6 percent, February's deliveries were essentially unchanged when compared with one year earlier. But, with the growth in deliveries in recent previous months well above reasonable estimated underlying consumption growth, it is not surprising that February's increase was substantially less.

The month's flat performance was primarily the result of weak gasoline deliveries, which fell 1.5 percent from a year ago, and the first year-to-year decline in residual fuel oil deliveries in five months. Deliveries of "other oils", following several months of strong year-to-year gains, also rose only slightly. Distillate fuel oil deliveries, however, rose 3.2 percent, while kerosine jet fuel deliveries jumped an unusually large 12 percent.

Underlying growth in total petroleum consumption, excluding the short-term, up-and-down swings of late in residual fuel oil usage, is estimated to be about 2.5 percent.

Domestic crude oil production continued to decline in February, falling to a level nearly 400 thousand B/D below last February and 1.2 million B/D lower than three years ago. However, natural gas liquids output—a by-product of natural gas production that accounts for about a sixth of the current 9.6 million B/D of domestic petroleum liquids production—was nearly the same as for one year earlier. Though it has varied from time to time on a short-term basis, NGL production continues to remain near the 1.6 million B/D of the past several years.

February's imports, though receding from January's recent-year record, at 7.9 million B/D were still more than 900 thousand B/D higher than last February's and well above last year's annual average of 7.1 million B/D. Product imports so far this year have been especially strong, with increases for most products raising the total for the first two months to about 440 thousand B/D over the same period last year. Although refinery utilization declined from January by a little more than the seasonal average, February's utilization still exceeded that of a year ago by about a percentage point. Paralleling the pattern of deliveries, gasoline production declined slightly year to year while output of other light products rose.

Total inventories fell 8 million barrels, roughly 15 million barrels less than for the same month in the previous three years. Weak gasoline deliveries contributed to a 4 million barrel increase in stocks of that product, while distillates' 11 million barrel decline was substantially less than recent previous experience for the month.

PRODUCT SUPPLIED [1]

Gasoline

DOWN AFTER A STRONG JANUARY.

February is traditionally one of the lowest months of the year for gasoline deliveries, but this February's deliveries dipped even more than normal. Following an unusually large increase in January, gasoline deliveries were down 1.5 percent year to year, following an increase of nearly 6 percent in the prior month. While movements in nonprimary inventories are one likely cause of such swings, over longer periods such fluctuations tend to average out. For the year to date, gasoline deliveries have risen 2.2 percent, closer to the range of the estimated trend in consumption as indicated by data on travel.

The travel data continue to show less variability than deliveries data, with year-to-year increases in miles traveled for 1988 falling mostly in the 3 to 4 percent range. No sign of slowing has been apparent; the average increase in travel during the fourth quarter was still about 3.5 percent, similar to the rate for the earlier portion of the year. With the fleet efficiency for gasoline-powered vehicles continuing to improve at an estimated rate of 1.5 percent or so, gasoline consumption growth is implied on the order of 1.5 to 2 percent.

Distillates

GROWTH FOR DIESEL, BUT NOT FOR HEATING OIL.

Although February's weather was colder than normal, contrasting with this year's unusually mild January, distillate deliveries' behavior has been just the reverse—deliveries' growth dropped from an above-trend increase of nearly 5 percent in January to 3.2 percent for February.

Because January, on average, had been extremely mild, February was actually 10 percent colder in absolute terms than the prior month—in rare contrast to the usual seasonal pattern.

API ESTIMATES

	FEBRUARY		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.6	0.1	17.8	2.3
Crude production[2]	7.9	(4.8)	7.9	(4.0)
Total imports[3]	7.9	13.4	8.1	17.2
Stocks (million bbl)[3]	1,029	(0.2)	na	na

Compared with last February, however, the past month's weather was only about 6 percent colder and much of this cold weather was outside of major heating oil regions. Thus, any weather impact on distillate deliveries for the month is likely to have been small.

Economic activity continues to propel the diesel sector of distillate demand, with both manufacturers' shipments (adjusted for inflation) and industrial production continuing to show year-to-year gains of about 5 percent. For highway usage, where changes in fuel efficiency have been minor, this suggests demand growth in the 50 to 75 thousand B/D range. Increases in rail ton-miles, however, have averaged only about 2 percent so far this year, so any consumption gains in this sector are likely to have been small. Industrial usage has also likely continued to grow in response to rising economic output.

Residual Fuel Oil
FIRST DECLINE IN FIVE MONTHS.

Deliveries of residual fuel oil in February are estimated to be 1,453 thousand B/D, representing a decrease of 15.7 percent from last month as well as a 9.2 percent decline from February 1988. The substantial month-to-month decrease, which contrasts with the seasonal norm of a slight decline from mid-winter peaks, was sufficient to bring deliveries to levels below the same month last year for the first time in five months, apparently reversing a pattern of strong deliveries.

The electric utility sector was believed to have been responsible for much of the decrease in total heavy fuel oil deliveries. Deliveries to that sector were believed to have been depressed by the cumulative effects of oil price increases, resulting in some displacement by more competitively-priced natural gas. But a marked slowdown in the rate of inventory accumulation which had previously bolstered deliveries over the last several months to that sector also apparently contributed to the decline. West Coast utilities, however, are reported to have registered sizeable increases in heavy fuel oil deliveries as a result of cold weather. Industrial customers, however, are also reported to have begun to switch to natural gas in response to the shift in relative prices.

Bunker markets varied by region, but overall deliveries were reported to be similar to levels of last month. West Coast deliveries were believed to be sluggish; Gulf Coast deliveries were believed to have been fairly robust; East Coast activity, on the other hand, is believed to have been adversely affected by lower-priced bunker fuel in the Rotterdam markets, depressing deliveries in that region.

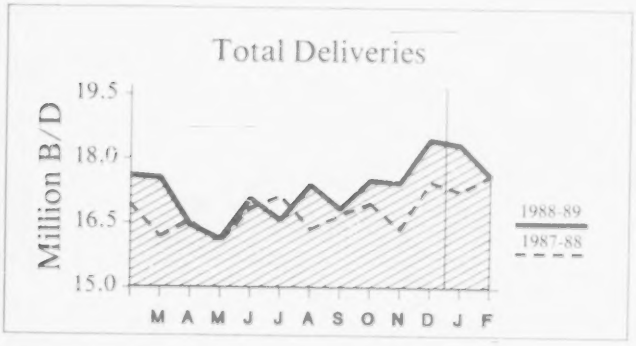
Kerosine Jet Fuel
DELIVERIES JUMP 12 PERCENT.

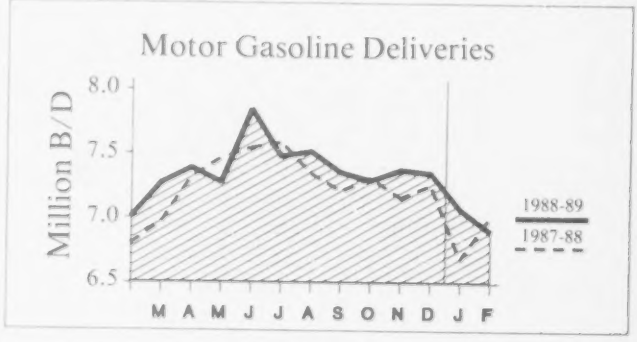
January's strength in kerosine jet fuel deliveries, masked in that month's year-to-year comparison by unusually high deliveries for the previous January, continued into February in a more visible way. Deliveries for the month jumped more than 12 percent compared with one year earlier. Though such a large increase in deliveries is unusual, it is not unprecedented in the month-to-month volatility of kerosine jet fuel deliveries and almost certainly has little to do with actual consumption changes.

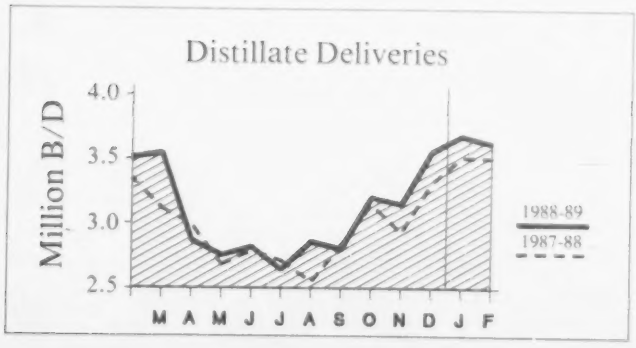
Growth in cargo traffic continues to show large increases on the order of 10 to 15 percent. However, this category accounts for only a fifth of industry revenue ton-miles, and less dramatic growth for passenger traffic as a whole is believed to have held the increase in overall miles flown to an estimated 4 or 5 percent.

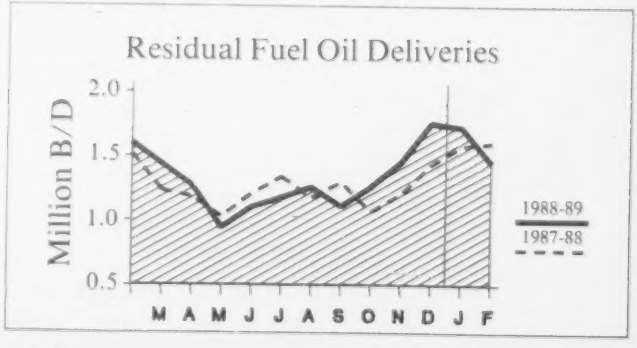
Other Oils
YEAR-TO-YEAR RISE SLOWS IN FEBRUARY.

Deliveries of other oils for February 1989 are estimated to be 4,197 thousand B/D, representing a decrease of 6.2 percent from January but an increase of 0.5 percent from February 1988.









Sustaining a trend of the last several months, petrochemical feedstocks apparently continue to maintain high levels of deliveries, with little switching between feedstocks. However, high rates of utilization at petrochemical plants are apparently limiting further increases in deliveries. Propane was reported to be the most attractive feedstock because of economics, and was also reportedly buoyed by the cold weather in the Midwest. It is also believed that some petrochemical plants are continuing to expand their use of butanes as a feedstock. Paraffinic naphtha is also reported to have been in greater demand during the last several weeks because of its ability to produce substantial quantities of ethylene.

Asphalt and road oil deliveries were reported to be somewhat lower than the seasonal norm. Road building and maintenance activity, which was already believed to be at a seasonal low, was further depressed by inclement weather in much of the country, as well as by budgetary constraints in some states. Imports of asphalt were reported to be unusually high as a result of continuing low prices for that product. Almost all of that source of supply is believed to have gone into stock accumulation, limiting deliveries. Refinery gas production and consumption are believed to be below levels of last month, contributing to the substantial month-to-month decline in the other oils category as a whole.

SUPPLY 1/

Production

ALASKA AND LOWER 48 BOTH DECLINE.

Crude oil production continued to register substantial year-to-year declines in February. Consistent with the pattern of the previous two months, however, Alaskan production is estimated to have declined once again on a year-to-year basis, falling by more than 100 thousand B/D. Lower 48 production is estimated to have declined by almost 300 thousand B/D on a year-to-year basis, bringing the year-to-year decline in total domestic crude oil production to almost 400 thousand B/D. The year-to-year declines in production indicate a continuation of decreases in lower 48 production as well as a flattening, if not a reversal, of an upward trend in Alaskan production seen during the last several years.

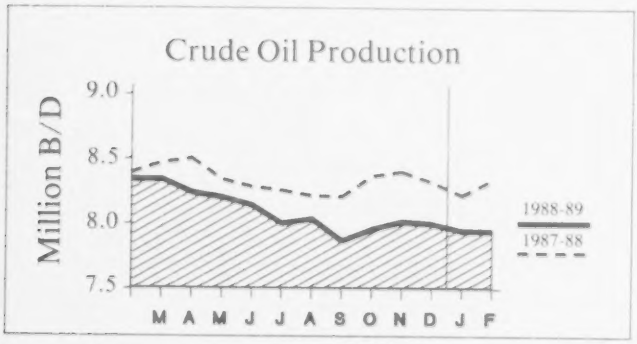
Natural gas liquids production, on the other hand, has not paralleled the downward trend in crude oil production. Current NGL production is roughly the same as in 1985, though crude oil production has declined by more than 1 million B/D. NGL production over the past several years has largely been determined by extraction economics, which have put recent apparent extraction rates close to those of 1985, and natural gas production, which has been increasing recently after several years of decline.

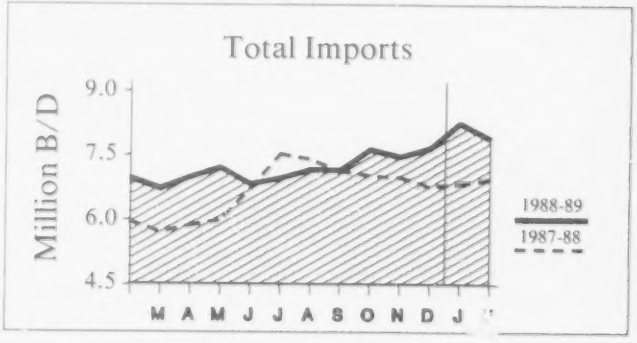
Imports

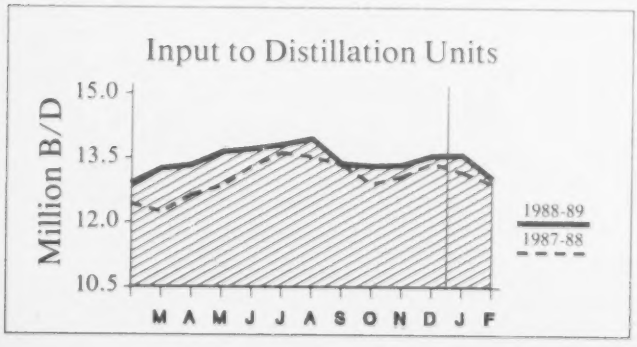
DOWN SLIGHTLY FROM JANUARY'S HIGH, UP FROM 1988.

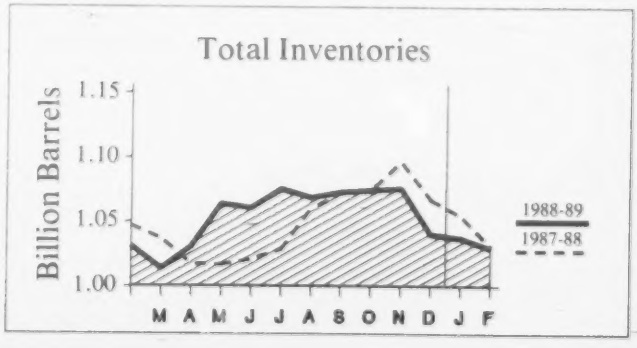
The surge in imports of the past several months, in part a reflection of efforts to take advantage of plentiful world supplies before OPEC's November agreement went into effect, receded slightly in February. Even with the decline from January's high level, however, February's 7.9 million B/D in imports were still more than 900 thousand B/D higher than one year earlier and well above last year's recent-year annual record of 7.1 million B/D. The continued decline in domestic production and rise in consumption together imply underlying growth in imports of more than 10 percent per year.

Though total imports declined from January's level, product imports have remained strong. Year-to-year increases for most major products have kept product imports at an average 2.7 million B/D for the first two months of this year, up nearly 20 percent over one year earlier. Out of the year-to-date increase of about 440 thousand B/D, gasoline and components accounted for









about 115 thousand B/D, and distillates, residual fuel oil, and kerosine jet fuel added 60 to 70 thousand B/D each. Residual fuel oil's contribution came despite a substantial year-to-year decline in this product's imports for February alone.

Refinery Operations

OUTPUT MIRRORS LIGHT PRODUCT DELIVERIES.

Refinery utilization in February slackened by about 3.5 percentage points from January's unusually high rate, slightly more than the usual seasonal pattern. Nevertheless, the 82.0 percent rate was up about a point from last February; if adjusted for capacity not in actual operation, utilization in February would be calculated at about 88 percent.

Weaker gasoline deliveries in February than in January were paralleled by refinery production of gasoline, which declined to 6.6 million B/D; February is traditionally a common time for refinery turnarounds and one of the lowest months of the year for gasoline production. Because of lower gasoline yields than for last February, gasoline output declined year-to-year by 1.3 percent. For distillates, in contrast, for which deliveries have continued to be healthy, output rose 5.7 percent. Residual fuel oil production continued to be down year to year as it has for most of the past seven months, with imports rather than domestic refineries absorbing most of the swings in deliveries.

Inventories

STOCKS DECLINE LESS THAN USUAL.

Total stocks fell 8 million barrels in February, about 15 million barrels less than for the same month in recent previous years. Weaker gasoline deliveries more than counter-balanced reduced refinery production in bringing about a 4 million barrel increase in inventories of that product. Distillate stocks declined only 11 million barrels, about half the average drop of the previous four years—but at month end, were about the same level as a year ago.

Month-end crude oil stocks continued near 330 million barrels as they have for the last several months.

1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 564 million barrels as of February 28, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	FEBRUARY			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	6,897	7,004	(1.5)	6,985	6,836	2.2
Finished leaded motor gasoline*	967	1,433	(32.5)	1,034	1,357	(23.8)
Finished unleaded motor gasoline*	5,930	5,571	6.4	5,951	5,479	8.6
Naphtha-jet	195	237	(17.7)	189	204	(7.4)
Kerosine-jet	1,426	1,270	12.3	1,416	1,317	7.5
Distillate fuel oil	3,623	3,511	3.2	3,650	3,514	3.9
Residual fuel oil	1,453	1,601	(9.2)	1,593	1,589	0.3
All other oils[4]	4,197	4,177	0.5	4,185	4,199	(0.3)
Reclassified[5]	- 190	- 216	(12.0)	- 212	- 261	(18.8)
Total domestic products supplied	17,601	17,584	0.1	17,806	17,398	2.3
Exports	869	867	0.2	795	879	(9.6)
Total products supplied	18,470	18,451	0.1	18,601	18,277	1.8
Supply:						
Domestic production:						
Crude oil[6]	7,939	8,338	(4.8)	7,942	8,272	(4.0)
Natural gas liquids	1,640	1,594	2.9	1,613	1,581	2.0
Other supply[7]	731	759	(3.7)	792	937	(15.5)
Total domestic supply	10,310	10,691	(3.6)	10,347	10,790	(4.1)
Imports:						
Crude oil, total	5,145[10/]	4,643[10/]	10.8	5,340[10/]	4,596[10/]	16.2
Canadian	630	679	(7.2)	615	656	(6.3)
Other	4,515	3,964	13.9	4,725	3,940	19.9
Products, total	2,733	2,303	18.7	2,729	2,291	19.1
Residual fuel oil	677	793	(14.6)	824	764	7.9
Other	2,056	1,510	36.2	1,905	1,527	24.8
Total imports	7,878	6,946	13.4	8,069	6,887	17.2
Total supply	18,188	17,637	3.1	18,416	17,677	4.2
Stock change, all oils	- 282	- 814	XXXX	- 185	- 600	XXXX
Refinery Operations						
Input to crude oil distillation units	13,043	12,907	1.1	13,328	13,044	2.2
Operable capacity	15,907	15,916	(0.1)	15,907	15,913	-
Refinery utilization (%)[8]	82.0%	81.1%	1.1	83.8%	82.0%	2.2
Crude oil runs	12,918	12,715	1.6	13,204	12,849	2.8

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Feb. 28[9]	Jan. 31[9]	Feb. 29	Previous Month	Year Ago
Crude oil 10/	330.3	330.5r/	347.8	(0.1)	(5.0)
Unfinished oils	103.6	99.9	97.8	3.7	5.9
Total motor gasoline**	246.6	242.8r/	240.7	1.6	2.5
Finished leaded motor gasoline*	39.2	40.2	51.7	(2.5)	(24.2)
Finished unleaded motor gasoline*	164.9	160.4r/	150.7	2.8	9.4
Naphtha-jet	6.5	6.5	6.7	-	(3.0)
Kerosine-jet	35.9	37.6r/	36.9	(4.5)	(2.7)
Distillate fuel oil	107.3	118.3r/	109.6	(9.3)	(2.1)
Residual fuel oil	44.0	45.5r/	45.5	(3.3)	(3.3)
All other oils	155.0	156.0r/	146.0	(0.6)	6.2
Total all oils	1,029.2	1,037.1r/	1,031.0	(0.8)	(0.2)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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American Petroleum Institute
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Washington, D.C. 20005

Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 3

APRIL 19, 1989

MARCH 1989

SUMMARY

Total deliveries rose 1.1 percent for March, with most of the increase occurring in residual fuel oil and the "other oils" category. For the quarter as a whole, the data show an increase in deliveries of only 0.4 percent, contrasting with an underlying estimated consumption growth rate of about 2.5 percent. If adjusted for above-trend deliveries last year and warmer weather this year, the rate of increase would have still amounted to only about 2 percent.

These first quarter data include January figures from the Department of Energy which were surprisingly low, given underlying consumption trends and the tendency for secondary and tertiary stocks to build when petroleum prices rise. Thus, we would have expected first quarter deliveries to have exceeded, rather than fallen short of, estimated consumption growth. Although the data are puzzling, the reasons for this divergence are unclear at present.

Domestic crude oil production in March dropped nearly 690 thousand B/D, or over 8 percent, from one year earlier. Although the unusually large decline reflected in part developments related to the tanker grounding near Valdez, almost 300 thousand B/D of the decrease was accounted for by falling production in the lower 48, a decline that has continued now for three years.

Restrictions on tanker operations at Valdez led to temporary curtailments in pipeline operations, which in turn resulted in reduced North Slope output for the month and uncertainties as to when normal shipments would resume. Roughly 600 thousand B/D of Alaskan crude normally goes to the eastern U.S. and the Virgin Islands via Panama and Cape Horn, in addition to about 1.4 million B/D delivered to the West Coast, Alaska, and Hawaii. However, adjustments in crude oil supply logistics, including the rerouting of some shipments and a greater short-term reliance on crude oil inventories, helped to mitigate the impact of the interruption. Alaska's production, which had been running near 2 million B/D, or one quarter of total domestic crude oil output, averaged about 1.7 million B/D for the month.

The lower 48's nearly 300 thousand B/D decline from a year ago, however, represented the continuation of a trend rather than a temporary interruption. In fact, since the major oil price decline of 1986, lower 48 production has fallen by 1.3 million B/D or 18 percent.

March's imports, though continuing to recede from January's recent-year record, still exceeded 7.3 million B/D and contributed to the first quarter's 13 percent, nearly 900 thousand B/D imports increase. For the first quarter, total imports represented 44 percent of deliveries, up from 39 percent one year earlier.

PRODUCT SUPPLIED [1]

Gasoline

DELIVERIES LAG BEHIND ESTIMATED CONSUMPTION.

March's deliveries of gasoline rose only 0.5 percent from one year earlier—despite an expected boost in travel because of an unusually early Easter, a holiday which falls in March only about one fifth of the time. Based on historical data, the occurrence of Easter in March this year would have been expected to have added perhaps 1 to 2 percent to the month's deliveries.

First quarter data also show gasoline deliveries essentially flat compared with last year. These data include January figures from the Department of Energy's *Petroleum Supply Monthly*, which were very surprising and substantially lower than API's original estimate for that month.

Thus, gasoline deliveries data continue to diverge from other indicators of demand. The economy is apparently retaining some of its strength, and the latest travel data also suggest continued growth in demand. In fact, data for January, the most recent available, show a year-to-year jump in highway travel of more than 6 percent—well above last year's average 3.5 percent growth trend and at variance with reported deliveries.

API ESTIMATES

	MARCH		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.7	1.1	17.5	0.4
Crude oil production[2]	7.7	(8.2)	7.8	(5.5)
Total imports[3]	7.3	9.2	7.7	12.9
Stocks (million bbl)[3]	1,008	(0.6)	na	na

However, deliveries and actual consumption have rarely matched exactly on a short-term basis; furthermore, differences between weekly reporting systems (such as API's) and monthly systems occasionally create divergences which are compensated for in subsequent months. Whether updated data for February will raise the first quarter's estimated deliveries remains to be seen; however, it is clear that the first quarter's increase in deliveries as currently calculated almost certainly under-represents consumption growth.

Distillates

YEAR-AGO SURGE MASKS GROWTH THIS MARCH. Distillate deliveries' nearly 4 percent decline from one year earlier indicated more about developments a year ago than for this March. Deliveries for March 1988 were an estimated 200 thousand B/D above trend, in part due to incentives created by changes in diesel tax collection procedures which took effect last April 1. Had the year-ago deliveries been on trend, this March's deliveries, rather than showing a decline, would have increased about 2 percent.

March's weather, being only slightly colder than a year ago and coming near the end of the heating season, likely had a positive, but minor, effect on heating oil demand for the month. In the farm sector, the planting season was just beginning in some southern regions of the U.S. Acreage intentions are up 5 to 12 percent for corn, soybeans, and winter wheat from last year's plantings, indicating some increase in farm distillate usage may be taking place compared with a year ago.

Transportation usage continues to be one of the major factors contributing to distillate fuel oil's strength. With economic growth apparently continuing—though there is some uncertainty as to whether last year's rate has been maintained—increases in highway usage can be expected to have continued at a rate near that of last year, which preliminary data show to have been roughly 5 percent. This implies a contribution to distillate demand growth of 50-75 thousand B/D.

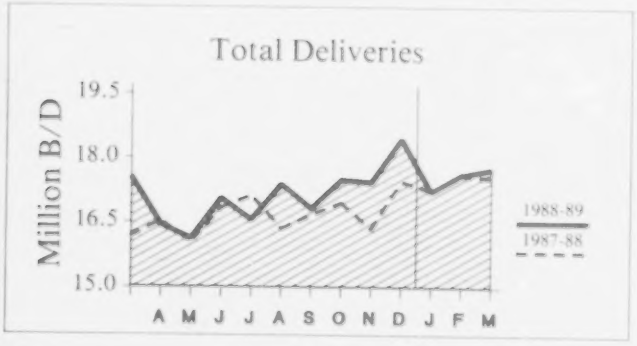
Residual Fuel Oil

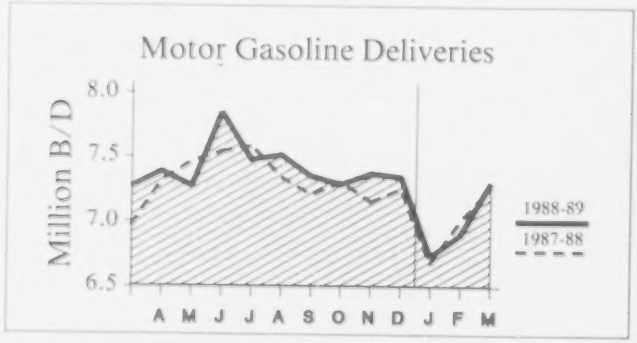
DELIVERIES REVERSE FEBRUARY DECLINE. Deliveries of residual fuel oil are estimated to have been 1,538 thousand B/D in March, representing an increase of 5.8 percent from last month as well as an increase of 7.3 percent from March 1988. The month-to-month rise in deliveries runs counter to the normal seasonal pattern.

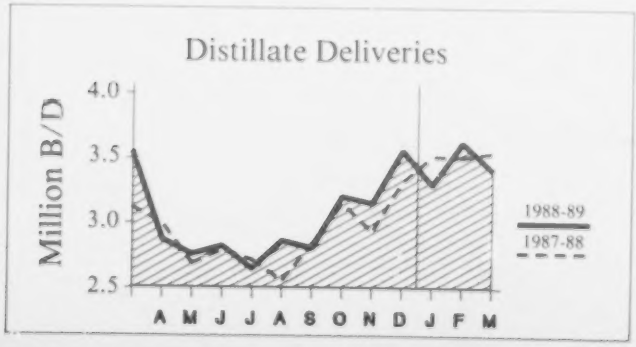
Much of the rise, however, is thought to have come from the industrial sector. Despite rising prices, several large industrial plants, especially in the Northeast, are reported to have taken delivery of sizeable, previously-contracted cargoes of heavy fuel oil during the month, offsetting the previous month's drop in deliveries. This month-to-month volatility, which is characteristic of deliveries to this sector, is believed to have been large enough to have overshadowed the seasonal decline which normally occurs at this time of year in residual fuel oil deliveries as a whole.

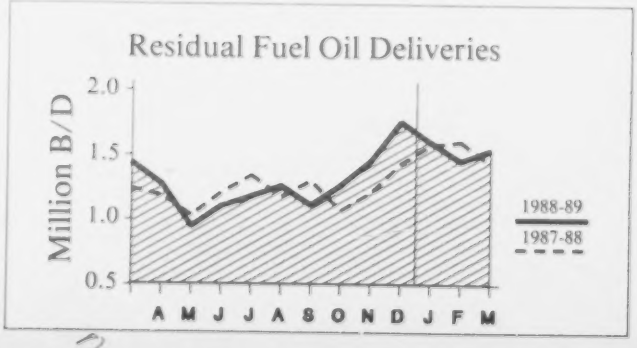
The electric utility sector, having undergone a temporary lull last month, is also believed to have experienced a slight uptick in purchases of heavy fuel oil, contributing to the month-to-month increase. Two reasons are believed to account for the apparently countercyclical behavior: purchases intended for delivery last month were apparently deferred due to lack of storage space until the current month, and a temporary lack of availability of natural gas to some utilities is also reported to have boosted deliveries. Because degree-heating days were close to last year's levels as well as the seasonal norm, weather is not believed to have accounted for much of the recent upswing in deliveries to this sector.

Bunker fuel deliveries, however, are reported to have contracted during the course of the month, with much of the downturn occurring in the Gulf Coast. Many shippers are reported to have been taking on contractual minimums as a result of the recent increase in bunker fuel prices, having apparently decided to defer supplementary purchases.









Kerosine Jet Fuel

TRAFFIC GROWTH ESTIMATED AT 2 TO 3 PERCENT.

Kerosine jet fuel deliveries were essentially flat in March compared with one year earlier, following an unusually large increase for February. Though the first quarter's deliveries as a whole were above trend, so were those for the same period one year earlier. Thus, perhaps only by coincidence, the 2.5 percent increase in deliveries for the first three months compares closely with estimated growth in air traffic.

Though the Eastern strike affected operations of an airline accounting for about 7 percent of industry revenue passenger miles, other airlines apparently picked up some of the slack. Adjusting for leap year effects, growth in miles flown for the first quarter is estimated to be in the 2 to 3 percent range, similar to the 3 percent growth rate of the latter half of last year.

Other Oils

DELIVERIES' RISE CONTINUES.

Deliveries of other oils for March are estimated to have been 4,272 thousand B/D, representing an increase of 1.8 percent from the previous month and a 4.6 percent rise from March 1988. As during the last several months, petrochemical feedstocks are believed to have dominated the other oils category. The rising availability of light-end feedstocks as well as the deteriorating competitive position of naphtha and gasoil have therefore apparently resulted in a shift in ethylene economics in favor of liquefied petroleum gases. Propane, whose deliveries to petrochemical plants were reported to have increased substantially, was the apparent feedstock of choice within the light-end group. It is also believed that, as a result of their increased availability in the wake of new RVP requirements, butanes are being increasingly used as ethylene feedstocks in several petrochemical plants. Naphtha and gasoil deliveries, in contrast, were reported to have been displaced by the lighter feedstocks due to changes in relative price brought about by recent increases in crude oil prices.

Asphalt and road oil deliveries are believed to have increased from levels of last month, but the increase is believed to have been somewhat less than the seasonal upswing normally seen at this time of year. Higher-than-normal precipitation are believed to have delayed road building and maintenance in several parts of the country, especially in the frostbelt. Similar weather-related problems as well as some weakness in new housing construction are also reported to have contributed to the weakness in deliveries of the product.

SUPPLY [1/]

Production

CRUDE OIL DROPS 8 PERCENT FROM LAST MARCH.

Partly a reflection of developments related to the tanker grounding near Valdez, domestic crude oil production in March fell almost 690 thousand B/D or more than 8 percent compared with a year ago. However, nearly 300 thousand B/D of the year-to-year decrease in domestic output was accounted for by the decline in lower 48 production, continuing the downtrend of the past three years.

A four-day halt in tanker operations at Valdez and reduced operations for the remainder of the month led to a cut in pipeline throughput, slowing Alaskan production to an average 1.7 million B/D for the month. This compares with recent prior levels near 2 million B/D.

The lower 48 production's fall-off, however, reflects a continuation of a decline that has reduced production outside Alaska by 1.3 million B/D, or 18 percent, since early 1986. Despite the partial recovery in crude oil prices over the past four months, drilling activity has continued at well below pre-1986 levels; experience of the past three years has demonstrated the volatility of prices and the risk that this volatility entails to producers.

Imports

FIRST QUARTER IMPORTS JUMP NEARLY 13 PERCENT.

Although March's imports continued to recede somewhat from January's recent high, first quarter imports were still up nearly 13 percent from a year ago. Total imports in the first quarter represented 44 percent of domestic deliveries, up from 39 percent one year earlier.

More than 40 percent of the first quarter's 880 thousand B/D increase was in the form of products, reflecting a continuation of the trend of the past several years of rising product imports. In the early 1980s, product imports averaged about 1.6 thousand B/D, while in the past several years they have been running in the 2.0 to 2.1 million B/D range. This year's first-quarter rise of 17 percent brought product imports to nearly 2.5 million B/D.

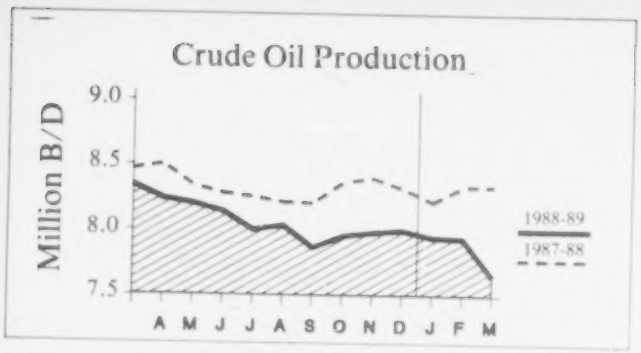
Imports of gasoline and components in the first quarter averaged 452 thousand B/D, up 74 thousand B/D or 20 percent from a year ago but short of last summer's three-month average of 520 thousand B/D. Imports of other products have increased as well during the first quarter, with distillates rising 96 thousand B/D and residual fuel oil, 44 thousand B/D.

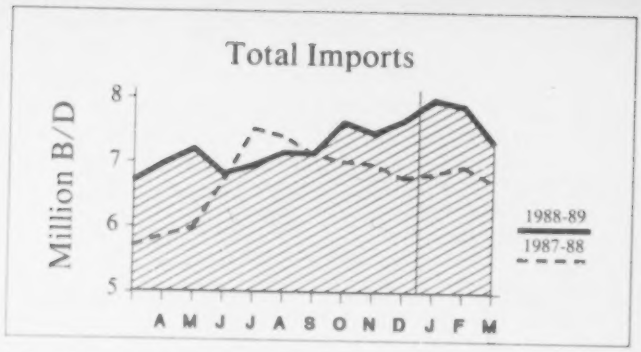
Refinery Operations

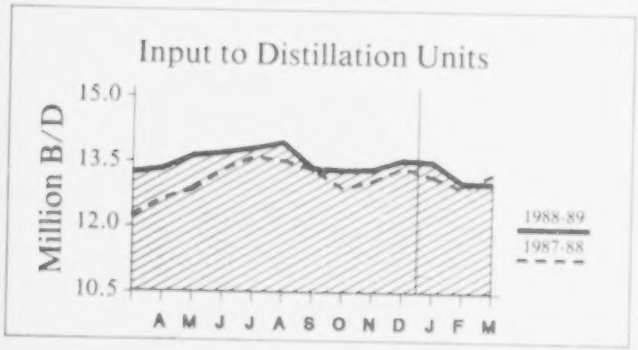
ACTIVITY DOWN COMPARED TO HIGH LEVELS LAST MARCH.

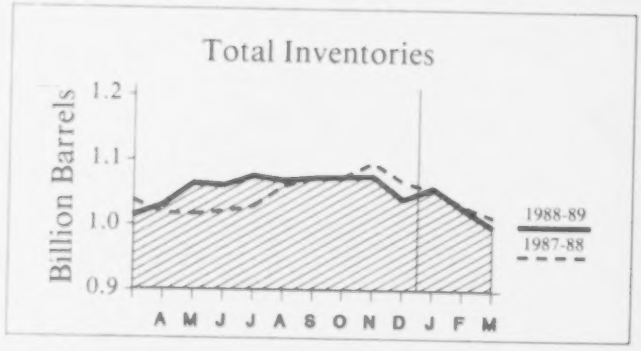
Compared with the unusually high refinery activity last March for that time of year, input to distillation units this March was down 1.6 percent—but up over 6 percent from the level of two years ago. Utilization of operable capacity averaged nearly 82 percent, still well above rates experienced for the month earlier in the 1980s. With a number of refineries in turnaround, gasoline production declined 2.6 percent and distillates, 1.3 percent. Residual fuel oil output, however, rose slightly.

With the approach of the summer driving season and the lead times necessary to move gasoline down the distribution chain, refiners are already in the process of making adjustments to meet new volatility requirements. The EPA's new standard reduces vapor pressure for the summer by varying amounts depending on the region; some Northeast states have proposed more stringent restrictions. Production of gasoline with lower volatility entails a reduction in the amount of butanes that can be used for gasoline blending. As a result, there has been some impact on gasoline production costs and









on gasoline supply capability; however, due to delays in issuance of the rule, the standard takes effect later than required in future years.

Inventories

TOTAL STOCKS FALL 28 MILLION BARRELS. Total inventories fell 28 million barrels in March, about twice the average for the month. Both gasoline and distillate stocks' respective declines of 16 million and 12 million barrels were somewhat more than average, but stocks of both products ended the month with levels at or above those of a year ago.

Crude oil inventories declined by 6 million barrels over the month; the interruption in Alaskan supplies helped to reduce West Coast (PAD V) crude oil stocks to about 76 million barrels at month-end, including Alaskan oil in transit. This compares with a range of from 70 to 90 million barrels experienced over the past three years.

1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 566 million barrels as of March 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	MARCH			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,299	7,265	0.5	6,977	6,982	(0.1)
Finished leaded motor gasoline*	992	1,421	(30.2)	980	1,379	(28.9)
Finished unleaded motor gasoline*	6,307	5,844	7.9	5,997	5,603	7.0
Naphtha-jet	225	197	14.2	198	202	(2.0)
Kerosine-jet	1,198	1,200	(0.2)	1,309	1,277	2.5
Distillate fuel oil	3,411	3,544	(3.8)	3,434	3,524	(2.6)
Residual fuel oil	1,538	1,434	7.3	1,532	1,536	(0.3)
All other oils[4]	4,272	4,084	4.6	4,288	4,160	3.1
Reclassified[5]	- 213	- 194	9.8	- 233	- 238	(2.1)
Total domestic products supplied	17,730	17,530	1.1	17,505	17,443	0.4
Exports	886	839	5.6	837	866	(3.3)
Total products supplied	18,616	18,369	1.3	18,342	18,309	0.2
Supply:						
Domestic production:						
Crude oil[6]	7,652	8,340	(8.2)	7,841	8,295	(5.5)
Natural gas liquids	1,675	1,628	2.9	1,657	1,597	3.8
Other supply[7]	1,054	1,137	(7.3)	775	1,005	(22.9)
Total domestic supply	10,381	11,105	(6.5)	10,273	10,897	(5.7)
Imports:						
Crude oil, total	4,934[10/]	4,766[10/]	3.5	5,169[10/]	4,654[10/]	11.1
Canadian	686	663	3.5	652	659	(1.1)
Other	4,248	4,103	3.5	4,517	3,995	13.1
Products, total	2,384	1,938	23.0	2,539	2,171	17.0
Residual fuel oil	703	610	15.2	755	711	6.2
Other	1,681	1,328	26.6	1,784	1,460	22.2
Total imports	7,318	6,704	9.2	7,708	6,825	12.9
Total supply	17,699	17,809	(0.6)	17,981	17,722	1.5
Stock change, all oils	- 917	- 560	XXXX	- 361	- 587	XXXX
Refinery Operations						
Input to crude oil distillation units	13,030	13,241	(1.6)	13,198	13,111	0.7
Operable capacity	15,907	15,861	0.3	15,832	15,896	(0.4)
Refinery utilization (%)[8]	81.9%	83.5%	(1.9)	83.4%	82.5%	1.1
Crude oil runs	12,873	13,072	(1.5)	13,043	12,925	0.9

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Mar. 31[9]	Feb. 28[9]	Mar. 31	Previous Month	Year Ago
Crude oil [10/]	325.5	331.0r/	353.6	(1.7)	(7.9)
Unfinished oils	110.2	106.6r/	102.1	3.4	7.9
Total motor gasoline**	231.1	246.7r/	231.3	(6.3)	(0.1)
Finished leaded motor gasoline*	32.7	39.0r/	48.9	(16.2)	(33.1)
Finished unleaded motor gasoline*	158.6	165.2r/	145.0	(4.0)	9.4
Naphtha-jet	5.9	6.5	7.2	(9.2)	(18.1)
Kerosine-jet	37.0	35.9	39.5	3.1	(6.3)
Distillate fuel oil	95.5	107.6r/	89.3	(11.2)	6.9
Residual fuel oil	41.1	44.0	44.1	(6.6)	(6.8)
All other oils	161.3	157.7r/	146.5	2.3	10.1
Total all oils	1,007.6	1,036.0r/	1,013.6	(2.7)	(0.6)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January, U.S. Department of Energy, February-March, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 4

MAY 17, 1989

APRIL 1989

SUMMARY

After relatively slow growth in deliveries for the first quarter, April's larger, 2.6 percent increase would at first seem to correlate well with estimated consumption growth. However, the comparison is against below-trend deliveries a year ago and, adjusted for this, April's year-to-year deliveries increase would have been nearly flat.

Nevertheless, for the first quarter, new data for February have lessened the apparent discrepancy between deliveries and estimated consumption. The first quarter's estimated deliveries increase published here last month had been depressed by the surprisingly low January deliveries reported by the Department of Energy (DOE). DOE's recently-released February data partially reversed the effect, with the first quarter increase now calculated at a somewhat higher 0.7 percent. This compares with an expected deliveries increase for the quarter of at least 1 percent. The latter is based on underlying consumption growth of about 2.5 percent, adjusted for unusually warm weather in January and for deviations from trend in the year-ago period.

Contributing to April's deliveries increase were continued growth for residual fuel oil, combined with gasoline deliveries which, once holiday effects are considered, were also reasonably strong. Deliveries of "other oils" also increased, though much of the increase was due to below-trend deliveries a year ago. Kerosine jet fuel deliveries, however, declined, and distillates rose year-to-year only because of below-trend deliveries last April.

Even though deliveries have been below apparent consumption trends, imports have continued to grow. Imports for the year to date, at 7.8 million B/D, have risen 13.5 percent from one year earlier and are up more than 50 percent from three years ago. Rising deliveries and falling domestic production have accounted for roughly equal portions of the 2.7 million B/D rise in imports over this period.

For April alone, imports increased to 8.0 million B/D from 7.3 million B/D in March. As a result, imports exceeded domestic crude oil output for the second time this year, even though Alaskan production had partially recovered from March's depressed levels caused by temporary restrictions on tanker traffic. However, total domestic supply still exceeded imports because other domestic sources, principally petroleum liquids extracted from natural gas streams, have continued to provide a significant portion of domestic supply.

PRODUCT SUPPLIED [1]

Gasoline

STRONGER THAN AT FIRST APPARENT... Following several months of weakness, April's gasoline deliveries finally displayed some strength. Although the 0.5 percent increase for the month may not seem that extraordinary, the comparison is against a month last year when deliveries were boosted by increased driving over the Easter holiday. This year, April experienced no such effect because Easter occurred in March. If adjusted for the holiday effect last April, this April's increase would likely have amounted to about 2 percent.

February data from the Department of Energy have also raised the calculated first-quarter increase in deliveries to 0.8 percent from earlier estimates. Data from DOE for January had been significantly lower than API estimates, but the situation for February data turned out to be the reverse, compensating for a major portion of the January difference.

Although travel data have been variable so far this year, they still suggest underlying consumption growth stronger than what has been apparent for deliveries. February's 2.1 percent increase in travel, adjusted for fuel efficiency improvements, by itself might have suggested a significant slowdown in gasoline consumption when compared with last year's average 3.5 percent increase—but January's rise of over 6 percent implied just the opposite. Thus, there is little conclusive evidence that the trend in travel growth has changed much from last year's average.

In addition, the rate of improvement in fuel efficiency, if anything, has likely continued to slip. In fact, preliminary data for the most recent model year show a decline in average new-car fuel efficiency for both domestics and imports of about 1.5 percent. This contrasts with increases averaging 1.7 percent per year over the previous five years. Since new car efficiencies still exceed those of vehicles being scrapped, the average for all vehicles on the road continues to improve, but at a slower rate, perhaps 1.5 to 2 percent.

API ESTIMATES

	APRIL		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.9	2.6	17.4	1.1
Crude oil production[2]	7.8	(5.4)	7.8	(5.6)
Total imports[3]	8.0	15.2	7.8	13.5
Stocks (million bbl)[3]	1,030	—	na	na

Distillates

...BUT DISTILLATE WAS WEAKER. While gasoline deliveries in April were stronger than their year-to-year increase implied, distillate deliveries were weaker than their 2.8 percent rise might suggest. Last year, changes in tax collection procedures helped to shift purchases which normally would have occurred in April into March, putting year-ago April deliveries at roughly 200 thousand B/D below trend. If last April's deliveries had been more in line with the then-existing trend, this April's deliveries would have shown a decline of nearly 4 percent.

Combining April's results with weak deliveries for the first quarter, distillate deliveries for the year to date are calculated to be essentially flat, after adjusting for the unusually warm weather experienced in January. However, this is at significant variance with estimated consumption, which is estimated to be growing at a 2.5 to 3 percent rate. In addition to highway diesel usage, one of the mainstays of distillate growth in recent years, continued economic growth has helped to add to industrial and other usage. In the farm sector, with the planting season now in full swing in many regions, increases in acreage over last year suggest some increase in consumption is continuing in that sector as well.

Residual Fuel Oil

LARGE INCREASES CONTINUE. Deliveries of residual fuel oil are estimated to have been 1,447 thousand B/D in April, representing a decline of 5.9 percent from March but an increase of 13.8 percent from a year ago. The month-to-month decline, however, is consistent with seasonal patterns. Much of the year-to-year increase represents apparent continued robustness which has characterized heavy fuel oil markets during the last several months.

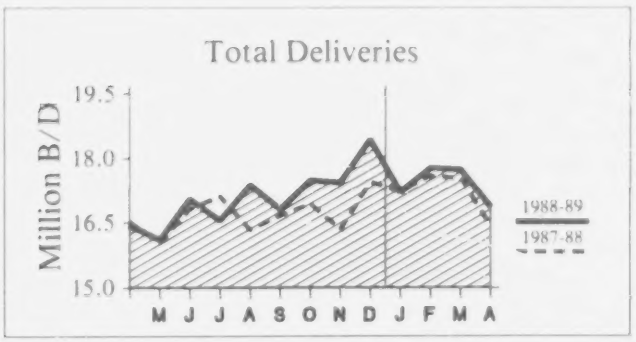
The industrial sector is believed to have accounted for much of the year-to year strength in heavy fuel oil markets. Although month-to-month delivery patterns are often erratic, this month's strength is not inconsistent with the upward trend observed in industrial heavy oil markets during the last two years.

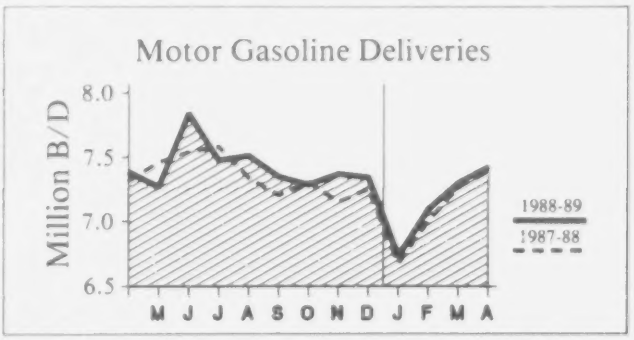
Deliveries to electric utilities, after adjustment for seasonal factors, have also remained strong, contributing to the year-to-year increase. A number of utilities are reported to have increased their purchases of heavy fuel oil to ensure availability of supplies. It should be noted, however, that the electric utility sector has also experienced an upward trend of deliveries over the past two years as a result of increased electricity demand and declining availability of hydroelectric power.

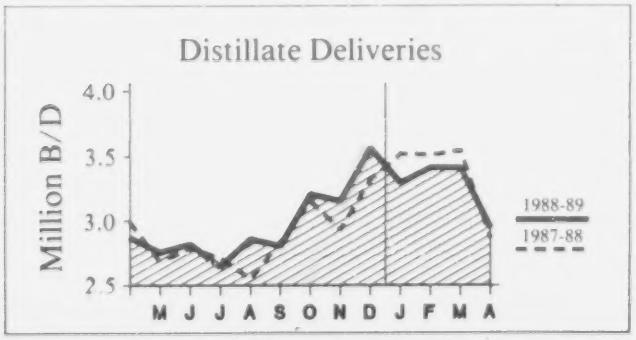
Partly offsetting the current strength in the industrial and electric utility sectors is apparent weakness in deliveries to bunker fuel markets. This development runs counter to the upward trend observed in bunker fuel deliveries during the past two years. Activity was believed to be sluggish in most regions of the country. The East Coast was reported to be particularly slow for most of the month. On the Gulf Coast, activity was also restrained during much of the month as several buyers were evidently displaying ambivalence in the face of increasing prices. Activity in that region, however, was reported to have picked up in the latter half of the month as buyers gradually increased their purchases.

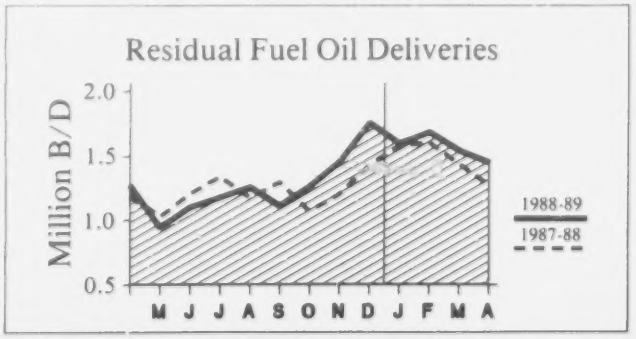
Kerosine Jet Fuel

GROWTH IN TRAFFIC SLOWS. Kerosine jet fuel deliveries declined 5.9 percent in April, following a first quarter whose deliveries are currently estimated to have been flat. This contrasts with deliveries growth which averaged about 3.5 percent in the second half of last year.









Growth in miles flown for the first quarter are also now estimated at only about 1 percent, with domestic passenger travel in particular down an estimated 2 percent for the quarter, a result of strike activity coupled with higher fares. After several years of flat or declining fares, adjusted for inflation, travel costs more recently have risen. Average revenue per passenger mile rose about 7 percent in 1988, and, with adjustments in discount programs, has reportedly continued to increase so far this year.

Other Oils

DELIVERIES UP FROM BELOW-TREND LEVEL LAST APRIL.

Deliveries of other oils for April were estimated to have been 3,913 thousand B/D, representing a decline of 8.4 percent from March, but an increase of 6.0 percent from April 1988. The month-to-month decline is somewhat greater than the seasonal norm. The year-to-year increase was more the result of unusual weakness in other oils' deliveries during the previous year than of strength this year.

Despite the overall decline in other oils deliveries, petrochemical feedstock deliveries appear to have maintained their apparent strength, buoyed by high industrial activity. LPGs as a whole are reported to have given some ground to the heavier feedstocks. Butane, however, is believed to be gaining wider acceptance as a feedstock.

Increases in asphalt and road oil deliveries are believed to have been substantially below the historical average for the month as a result of unusually wet weather in many parts of the country.

SUPPLY [1/]

Production

CRUDE OIL CONTINUES ITS DECLINE.

Although Alaskan production had partially recovered from March's temporary drop, U.S. crude oil output in April was still down 444 thousand B/D or 5.4 percent from one year earlier. Alaskan production was down nearly 140 thousand B/D from a year ago and about 70 thousand B/D from February, before March's tanker accident led to shipping restrictions at Valdez. Lower 48 production fell 305 thousand B/D year to year.

Preliminary data for the past six months, on the surface, suggest a slowing of the decline rate for the lower 48. Although it is plausible that higher crude oil prices, which by April had risen roughly $7 per barrel since late last year, have been helping to slow the production decline, in fact, much of the apparent reduction in the rate of decline can be attributed to seasonal factors. We estimate that the seasonally-adjusted decline rate in lower 48 production has recently been running at 300 to 350 thousand B/D per year.

Other data do not suggest stabilization of upstream activity in recent months. First quarter oil completions are estimated to have been down substantially from a year ago and to have declined by more than two thirds since early 1986. Well servicing activity was also down, declining 9 percent in the first quarter versus one year earlier and by more than one fourth compared with three years ago.

In contrast to crude oil's decline in April, the production of natural gas liquids, which account for roughly one sixth of domestic petroleum output, rose slightly versus a year ago.

Imports

UP OVER 50 PERCENT IN THREE YEARS.

Imports rose to 8.0 million B/D in April, bringing the year-to-date average to 7.8 million B/D—13.5 percent or more than 900 thousand B/D higher than for one year earlier. In fact, over the past three years, imports for the January-April period have risen more than 50 percent or about 2.7 million B/D. This increase is attributable in roughly equal proportions to rising deliveries and declining domestic crude oil production.

Crude oil imports were up close to 700 thousand B/D in April, while products rose about 375 thousand B/D. Roughly half of the over 19 percent increase in product imports was accounted for by residual fuel oil; most of the rise in deliveries of this product so far this year has been met from imports rather than domestic refinery output.

Imports of gasoline and components rose 80 thousand B/D to 477 thousand B/D from last April, though part of the increase reflects below-average imports a year ago. Gasoline imports may have been tempered to some extent by the cost of foreign supplies which were higher relative to the domestic market than in the recent past. Imports of distillates continued strong in April, increasing more than 90 thousand B/D to 300 thousand B/D.

Refinery Operations

UP FROM MARCH, DOWN FROM LAST APRIL.

Input to distillation units, though up from the prior month's level, was still down 1.4 percent in April compared with relatively strong levels one year earlier. Utilization still averaged nearly 83 percent of operable crude oil distillation capacity. On the basis of capacity in actual operation, the utilization rate would be calculated at about 86.5 percent.

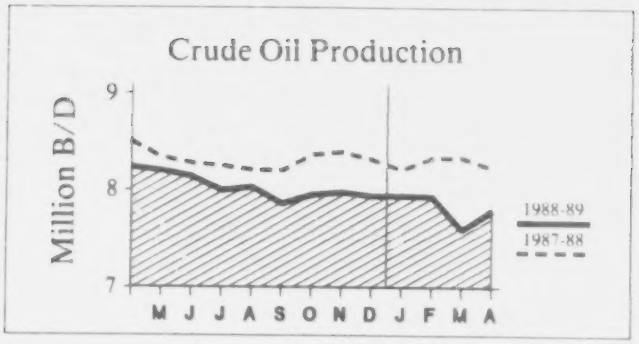
Production of most major products was down slightly from a year ago except for residual fuel oil, whose output rose marginally.

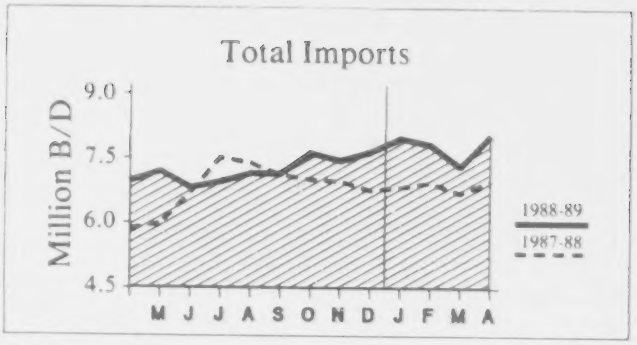
Inventories

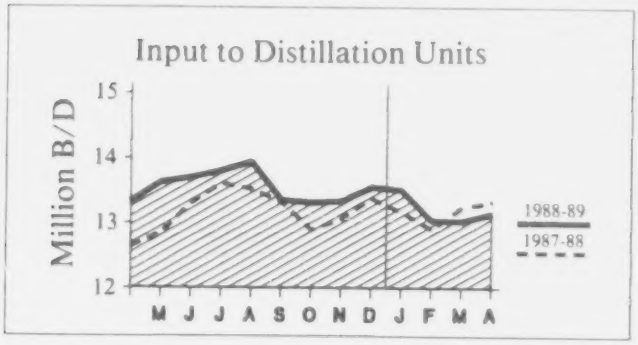
REBOUND IN CRUDE RAISES TOTAL INVENTORIES.

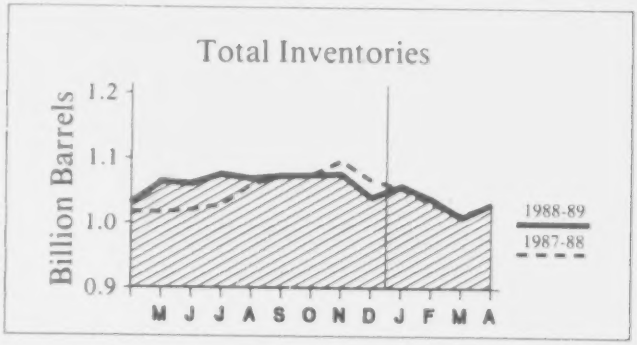
Total stocks rose 21 million barrels in April. Two thirds of the rise was attributable to an increase in crude oil stocks to 240 million barrels, the highest level since October. However, part of the rise for crude oil represents inventory replenishment; crude oil inventories had been lower than usual at the end of March, partly because of the temporary restrictions on shipments of Alaskan oil following the tanker accident near Valdez.

Gasoline stocks declined 8 million barrels to 223 million barrels, close to the average April level of the past several years. Distillate stocks, too, ended the month in a seasonally typical range, remaining near 96 million barrels over the month. Over the past five years, end-of-season distillate stocks have consistently been in the 94 to 100 million barrel range.









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2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 567 million barrels as of April 30, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	APRIL			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,423	7,384	0.5	7,135	7,082	0.7
Finished leaded motor gasoline*	903	1,438	(37.2)	963	1,394	(30.9)
Finished unleaded motor gasoline*	6,520	5,946	9.7	6,172	5,688	8.5
Naphtha-jet	197	221	(10.9)	199	206	(3.4)
Kerosine-jet	1,098	1,167	(5.9)	1,234	1,250	(1.3)
Distillate fuel oil	2,951	2,870	2.8	3,266	3,362	(2.9)
Residual fuel oil	1,447	1,272	13.8	1,564	1,471	6.3
All other oils[4]	3,913	3,693	6.0	4,187	4,044	3.5
Reclassified[5]	- 159	- 167	(4.8)	- 197	- 221	(10.9)
Total domestic products supplied	16,870	16,440	2.6	17,388	17,194	1.1
Exports	814	678	20.1	833	819	1.7
Total products supplied	17,684	17,118	3.3	18,221	18,013	1.2
Supply:						
Domestic production:						
Crude oil[6]	7,792	8,236	(5.4)	7,815	8,281	(5.6)
Natural gas liquids	1,629	1,609	1.2	1,641	1,600	2.6
Other supply[7]	920	869	5.9	897	971	(7.6)
Total domestic supply	10,341	10,714	(3.5)	10,353	10,852	(4.6)
Imports:						
Crude oil, total	5,735[10/]	5,049[10/]	13.6	5,326[10/]	4,752[10/]	12.1
Canadian	626	703	(11.0)	642	670	(4.2)
Other	5,109	4,346	17.6	4,684	4,082	14.7
Products, total	2,300	1,924	19.5	2,459	2,110	16.5
Residual fuel oil	635	465	36.6	768	650	18.2
Other	1,665	1,459	14.1	1,691	1,460	15.8
Total imports	8,035	6,973	15.2	7,785	6,862	13.5
Total supply	18,376	17,687	3.9	18,138	17,714	2.4
Stock change, all oils	+ 692	+ 569	XXXX	- 83	- 299	XXXX
Refinery Operations						
Input to crude oil distillation units	13,149	13,330	(1.4)	13,179	13,165	0.1
Operable capacity	15,907	15,861	0.3	15,801	15,887	(0.5)
Refinery utilization (%)[8]	82.7%	84.0%	(1.5)	83.4%	82.9%	0.6
Crude oil runs	13,029	13,167	(1.0)	13,007	12,985	0.2

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Apr. 30[9]	Mar. 31[9]	Apr. 30	Previous Month	Year Ago
Crude oil [10/]	339.7	325.5	357.1	4.4	(4.9)
Unfinished oils	111.1	110.4r/	102.8	0.6	8.1
Total motor gasoline**	223.1	231.2r/	226.0	(3.5)	(1.3)
Finished leaded motor gasoline*	29.4	32.7	47.2	(10.1)	(37.7)
Finished unleaded motor gasoline*	154.6	158.7r/	142.3	(2.6)	8.6
Naphtha-jet	6.1	5.9	6.7	3.4	(9.0)
Kerosine-jet	38.5	37.0	39.3	4.1	(2.0)
Distillate fuel oil	95.9	95.5	94.3	0.4	1.7
Residual fuel oil	40.9	41.1	43.2	(0.5)	(5.3)
All other oils	174.8	162.8r/	161.2	7.4	8.4
Total all oils	1,030.1	1,009.4r/	1,030.6	2.1	-

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-February, U.S. Department of Energy, March-April, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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American Petroleum Institute
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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 5

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MAY 1989

SUMMARY

Total deliveries jumped 4.7 percent in May, the largest year-to-year increase in several months. Though half of the roughly 750 thousand B/D increase was accounted for by residual fuel oil, the rise for the remaining products, at 2.5 percent, was still larger than has been the case since late last year. For residual fuel oil, most of the 40 percent increase was due to unusually low deliveries a year ago. However, residual fuel oil deliveries this May were still reasonably strong.

Despite the above-average increase in domestic deliveries for May, the underlying pattern of consumption growth appears to have been altered by a marked flattening of jet traffic, some moderation in overall economic growth, and recent higher petroleum prices. Excluding residual fuel oil's recent gains, we now estimate consumption growth at about 2 percent. Including residual fuel oil—whose deliveries and consumption patterns tend to be more volatile than for other major products because of fuel switching capabilities—we estimate that recent consumption growth has been slightly higher.

Over the past seven months, in a reversal of the pattern of previous years, Alaskan production has been contributing to, rather than offsetting, the production decline elsewhere in the U.S. Even after accounting for temporary disruptions arising from the Valdez tanker accident, which cut Alaskan production for a short period earlier this year, year-to-year declines in Alaska have been running 40 to 50 thousand B/D. By far the largest portion of the U.S. crude oil production decline, however, continues to be in the lower 48. Since early 1986, production outside Alaska has fallen by about 1.4 million B/D or nearly 20 percent.

Rising consumption and declining domestic production helped to keep May's imports near the previous month's recent-year high of 8.0 million B/D. Year to year, May's imports rose 9 percent, or 650 thousand B/D, to 7.8 million B/D. During the month, utilization of refinery capacity in actual operation exceeded 91 percent, not far short of peak levels of around 93 percent experienced last summer.

PRODUCT SUPPLIED [1/]

Gasoline

MAY'S RISE BRINGS YEAR-TO-DATE GROWTH TO 1.4 PERCENT.

Recent economic data suggest that although the economy continues to expand, its growth is moderating. This, combined with higher gasoline prices in the past two months, would be expected to have had some dampening effect on gasoline demand. Although this may be the case, it has not been evident in deliveries data of the past month or two.

May's deliveries rose 2.0 percent, year to year, in the range of the 1.5 to 2 percent growth rate for gasoline consumption we had previously been estimating. This follows April's results, which, once adjusted for holiday effects, also showed an increase within that range. Combined with first quarter results boosted by the Department of Energy's recently-released March data, this brings the average deliveries increase for the first five months to 1.4 percent compared with monthly data for 1988.

Data on miles traveled, as well, though available only through the first quarter, have so far provided only a slight hint, at best, of a slowdown in gasoline demand. Though it is true that travel growth in the first quarter as a whole, at about 4 percent, was actually higher than last year's average 3.5 percent rate, this was because of a jump in January of over 6 percent. Even so, January's unusually large increase was only partly offset by a much weaker rise for February, and travel in March was estimated to be up 3.3 percent—only slightly below last year's average rate. Data for more recent months, when they become available, may give a clearer indication of recent gasoline consumption trends.

Unleaded now accounts for more than 87 percent of gasoline deliveries. Its year-to-year gain in share has averaged more than

API ESTIMATES

	MAY		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.9	4.7	17.3	2.1
Crude production[2/]	7.8	(4.4)	7.8	(5.4)
Total imports[3/]	7.8	9.0	7.8	12.5
Stocks (million bbl)[3/]	1,041	(2.1)	na	na

6 percentage points so far this year, continuing the slightly greater pace of the previous two years related to the gradual, region-by-region introduction of midgrade unleaded by various suppliers.

Unleaded premium has continued to grow more rapidly, proportionately, than unleaded as a whole. It has been gaining market share at a rate of 2 to 3 percentage points annually over the past several years and now accounts for more than 25 percent of the market. Although the penetration of midgrade unleaded has been under way for several years, its share is still relatively small, as introductions have been on a market-by-market, supplier-by-supplier basis. Additional information on this market segment is expected to be available soon; the Department of Energy has been collecting midgrade data since January and is expected to begin publishing this data next month.

Distillates

SOME SLOWING IN DEMAND MAY BE TAKING PLACE.

Distillate deliveries, after declining year-to-year for the first quarter and rising in April only because of below-trend deliveries a year ago, rose 1.5 percent in May. Though this still appears to be less than the growth in consumption, that growth rate, based on current economic trends, is likely only holding its own or slipping slightly.

The moderating economy suggests that on-highway usage, along with industrial consumption, may be growing a little less rapidly than before. Industrial output, for example, though still showing year-to-year gains of about 4 percent most recently, has moderated somewhat from the 5 percent gains of late last year. Data on shipments, however, have as yet shown little if any slackening.

Rail traffic increases continue to be only slight, with growth in ton-miles currently running at only about 1 percent; what growth there is in this sector is largely due to increased shipments of coal, and to a lesser extent, chemical products. Small gains in distillate volume from increased farm acreage this year are also likely. Overall, growth in distillate consumption is estimated to be near 2.5 percent.

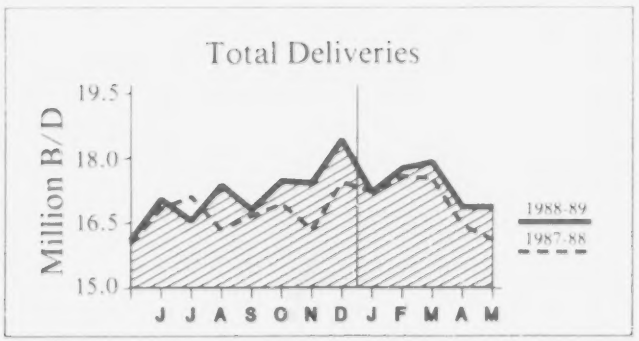
Residual Fuel Oil

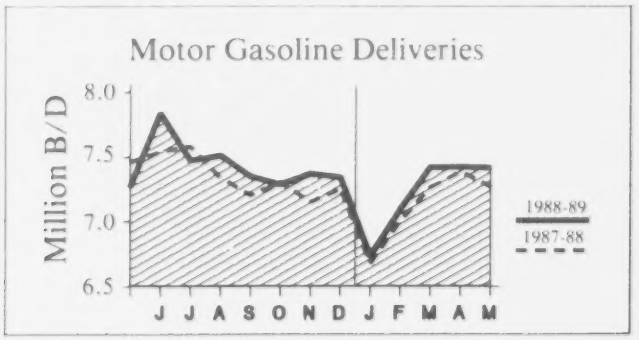
LOW DELIVERIES LAST MAY EXAGGERATE THIS YEAR'S GAIN.

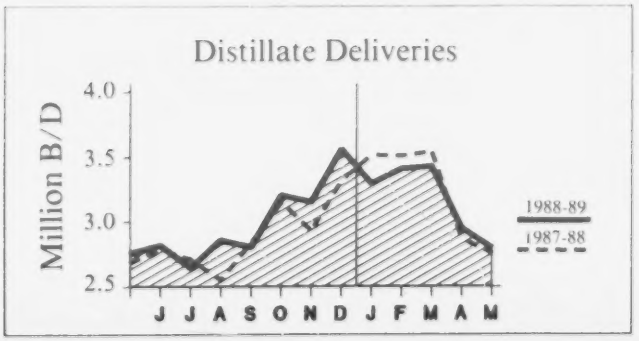
Deliveries of residual fuel oil are estimated to have been 1,324 thousand B/D in May, representing a decline of 8.5 percent from April but an increase of 40.1 percent from the previous year. The month-to-month decline is similar to the seasonal average. Most of the substantial year-to-year increase results from the record low level of deliveries recorded in May 1988. Consumption in 1989 so far is increasing at an estimated 5 to 7 percent, somewhat less than the year-to-date increase in deliveries.

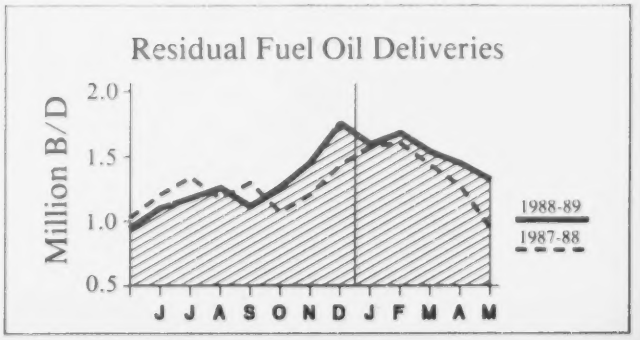
Deliveries to the electric utility sector, after adjustment for seasonal factors, are believed to have been strong. Continuing a pattern observed last month, utilities are reported to have increased their stocks, contributing substantially to the divergence between total deliveries and direct consumption. Several utilities, however, were believed to have increased their direct consumption as a result of above-trend electricity consumption in several parts of the country. In addition, occasional disruptions of natural gas supplies are also reported to have resulted in additional demand for heavy fuel oil.

Having displayed strength during the past several months, industrial markets are reported to have subsided as a result of









ample stocks and the availability of competitively priced natural gas. Domestic bunker fuel deliveries apparently continue to be weak, but activity is reported to have varied by region. East Coast markets are reported to be subdued as a result of more competitive prices in Rotterdam, while deliveries in the Gulf Coast are believed to have increased slightly, partly as a result of unintended increases in bunker fuel output arising from maintenance problems at certain refineries. Nonetheless, uncertainties about the direction of oil markets are believed to have restrained purchases of bunker fuel during the month.

Kerosine Jet Fuel

FLATTENING TRAFFIC SLOWS CONSUMPTION. Overall, growth in air traffic continues to be weak. In fact, in the last several months traffic has actually been running slightly behind levels of a year ago because of declines in domestic passenger travel related to strike activity and higher fares. Nevertheless, cargo traffic, as well as international passenger flights, have continued to be strong, with recent year-to-year gains running around 10 percent.

The slowdown in air traffic has been reflected in kerosine jet fuel deliveries. Although May's deliveries rose 3.7 percent, this was hardly enough to offset a particularly weak showing for April. For the year to date, deliveries have risen less than 1 percent, in line with air traffic data for a similar period.

Other Oils

DELIVERIES RISE 4.6 PERCENT. Deliveries of other oils were estimated to have been 4,061 thousand B/D, representing an increase of 3.8 percent from April as well as a 4.6 percent increase from last year. The month-to-month increase is consistent with seasonal patterns. Much of the year-to-year increase, however, resulted from low levels of deliveries last May rather than unusual strength in the current month.

Petrochemical deliveries are believed to have remained robust during the month, with most of the feedstocks reflecting that strength. Ethane deliveries, however, have apparently declined somewhat as a result of shifts in petrochemical plant economics, which are believed to have resulted in increased deliveries of other feedstocks, especially those at the heavier end.

Asphalt and road oil deliveries, however, are believed to have increased only slightly from last month's levels in contrast to the normal seasonal pattern. Wet weather in several parts of the country is believed to have been responsible for the lack of demand.

SUPPLY [1/]

Production

ALASKA CONTRIBUTES TO U.S. DECLINE. For the seventh month in a row, Alaska contributed to the U.S. production decline in May. Total domestic crude oil output fell 359 thousand B/D, year to year, with 43 thousand B/D of the decline occurring in Alaska. Although temporary restrictions stemming from the Valdez tanker accident were responsible for a dip in Alaskan production for a short period earlier this year, Alaskan declines otherwise have still been running 40 to 50 thousand B/D over the past half year or so.

This contrasts with the pattern of the previous decade. Since 1977, when the Prudhoe Bay field came on stream, Alaskan production had been increasing almost each year. From 1986, when lower 48 production began to sag as world oil prices slid, through last year, it was still adding 40 to 90 thousand B/D per year to domestic production. This provided at least some offset to the steady decline for the rest of the U.S. over the period.

Reduced production in the lower 48 still accounts for most of the domestic production decline, however. With May's drop in lower 48 production of 316 thousand B/D, the decline since early 1986 outside Alaska now amounts to about 1.4 million B/D or nearly 20 percent.

Imports

RISE CONTINUES. Imports were up 9 percent, or 650 thousand B/D, from one year earlier in May, dropping only slightly from April's recent-year high of 8 million B/D.

Product imports rose 165 thousand B/D, with distillate imports rising about 25 thousand B/D, residual fuel oil increasing about 90 thousand B/D from last May's below-trend levels, and kerosine jet fuel imports jumping nearly 50 thousand B/D. Imports of gasoline and components, though down about 60 thousand B/D from last May's level of over one-half million B/D, for the year to date are still ahead by about 35 thousand B/D.

World gasoline markets, in which the U.S. plays the role of a major importer, are being affected by many factors, including some similar to those occurring in the U.S. Lead phasedown and shifts to unleaded fuels are taking place in Europe and Canada, with recent retail tax incentives in such countries as the U.K. and France speeding the switch this year—and where unleaded fuels already have significant market shares, premium grades have been gaining increasing popularity.

In addition to the greater need for octane alternatives implied by these developments, demand in many areas has experienced healthy growth due to increased travel, or in the case of Brazil (a major source of U.S. gasoline imports), due to scaling back of that country's government-subsidized fuel alcohol program. Though refining capacity enhancements are being made in various parts of the world in response to these developments, indications are that there is now less slack in world gasoline markets than has been the case in the recent past.

Refinery Operations

INPUT MATCHES LAST MAY, GASOLINE OUTPUT RISES. Utilization of operable capacity rose to 86.8 percent in May, and on the basis of capacity in actual operation, exceeded 91 percent. This high rate is only slightly lower than the levels of last summer, when the refining industry stretched utilization of

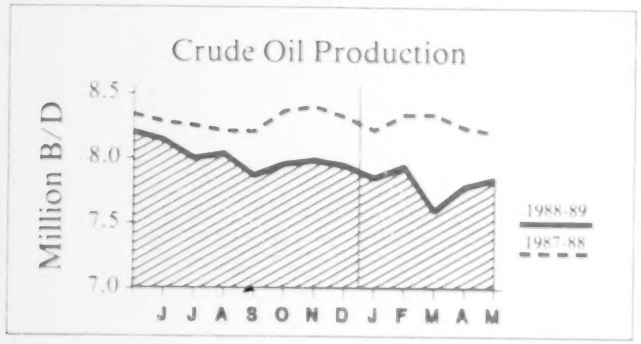
capacity in actual operation to around 93 percent. Though input to distillation units this May roughly matched that of a year ago, gasoline production rose 1.4 percent year to year.

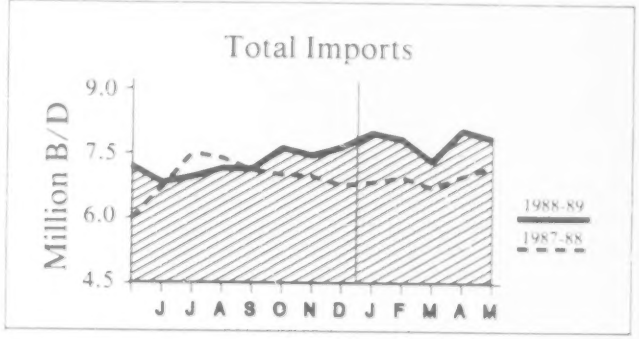
The increase in gasoline output came despite tighter vapor pressure regulations which have cut gasoline production capacity by roughly 100 thousand B/D for the summer months. Apparently, projects to enhance production capability and upgrade octane availability have enabled refiners to reduce the impact of this development to some extent.

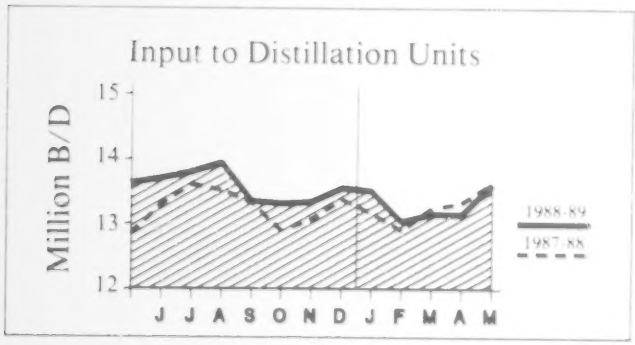
Distillate output dropped over 6 percent in May, while residual fuel oil output rose more than 10 percent.

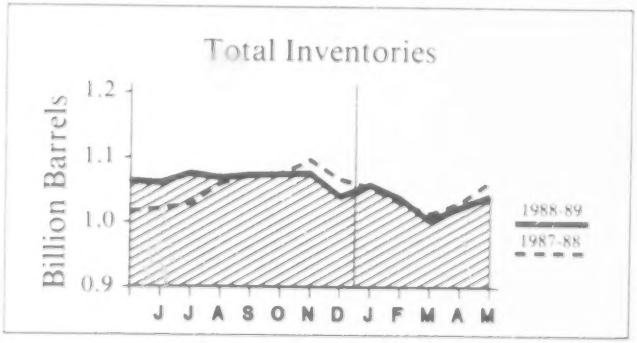
Inventories

STOCKS RISE IN LINE WITH AVERAGE. Total stocks rose 18 million barrels in May, similar to the average increase for the month in recent previous years. Gasoline stocks declined slightly, and at 220 million barrels, were within the 215 to 235 million barrel range for the month experienced in the previous four years. Distillate stocks, as well, remained near April's closing levels, rising slightly to 98 million barrels.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 570 million barrels as of May 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	MAY			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied						
Total motor gasoline	7,415	7,269	2.0	7,221	7,120	1.4
Finished leaded motor gasoline*	950	1,456	(34.8)	973	1,406	(30.8)
Finished unleaded motor gasoline*	6,465	5,813	11.2	6,248	5,714	9.3
Naphtha-jet	212	208	1.9	200	207	(3.4)
Kerosine-jet	1,196	1,153	3.7	1,241	1,230	0.9
Distillate fuel oil	2,798	2,757	1.5	3,174	3,239	(2.0)
Residual fuel oil	1,324	945	40.1	1,514	1,364	11.0
All other oils[4]	4,061	3,881	4.6	4,140	4,011	3.2
Reclassified[5]	- 136	- 96	41.7	- 165	- 195	(15.4)
Total domestic products supplied	16,870	16,117	4.7	17,325	16,976	2.1
Exports	867	817	6.1	834	819	1.8
Total products supplied	17,737	16,934	4.7	18,159 r	17,795	2.0
Supply						
Domestic production						
Crude oil[6]	7,841	8,200	(4.4)	7,818	8,264	(5.4)
Natural gas liquids	1,648	1,624	1.5	1,636	1,605	1.9
Other supply[7]	988	982	0.6	917	974	(5.9)
Total domestic supply	10,477	10,806	(3.0)	10,371	10,843	(4.4)
Imports	10/	10/		10/	10/	
Crude oil, total	5,698	5,213	9.3	5,398	4,846	11.4
Canadian	657	705	(6.8)	633	677	(6.5)
Other	5,041	4,508	11.8	4,765	4,169	14.3
Products, total	2,148	1,983	8.3	2,399	2,084	15.1
Residual fuel oil	514	423	21.5	716	604	18.5
Other	1,634	1,560	4.7	1,683	1,480	13.7
Total imports	7,846	7,196	9.0	7,797	6,930	12.5
Total supply	18,323	18,002	1.8	18,168	17,773	2.2
Stock change, all oils	+ 586	+1,068	XXXX	+ 9	- 22	XXXX
Refinery Operations						
Input to crude oil distillation units	13,609	13,630	(0.2)	13,295	13,260	0.3
Operable capacity	15,674	15,883	(1.3)	15,725	15,886	(1.0)
Refinery utilization (%)[8]	86.8%	85.8%	1.2	84.5%	83.5%	1.2
Crude oil runs	13,481	13,472	0.1	13,124	13,084	0.3

Stocks (millions bbls.)	1989		1988[2]	% Change from	
	May 31[9]	Apr. 30[9]	May 31	Previous Month	Year Ago
Crude oil 10/	344.4	339.6r/	357.7	1.4	(3.7)
Unfinished oils	115.0	111.2r/	112.1	3.4	2.6
Total motor gasoline**	220.1	222.7r/	225.6	(1.2)	(2.4)
Finished leaded motor gasoline*	26.0	28.9r/	45.1	(10.0)	(42.4)
Finished unleaded motor gasoline*	154.2	154.9r/	143.3	(0.5)	7.6
Naphtha-jet	6.0	5.9r/	7.4	1.7	(18.9)
Kerosine-jet	39.0	38.4r/	39.4	1.6	(1.0)
Distillate fuel oil	98.3	96.0r/	104.5	2.4	(5.9)
Residual fuel oil	39.6	40.8r/	45.7	(2.9)	(13.3)
All other oils	179.0	168.7r/	171.3	6.1	4.5
Total all oils	1,041.4	1,023.3r/	1,063.7	1.8	(2.1)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-March, U.S. Department of Energy, April-May, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
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** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 6

JULY 19, 1989

JUNE 1989

SUMMARY

Although growth in petroleum deliveries appears to be slowing so far in 1989 as the pace of the economy moderates, an acceleration in the decline of crude oil production has led to a rise in imports nearly as large as last year's increase.

Imports for the first half rose 9 percent, only slightly less than last year's annual increase of 11.3 percent. For the first six months of 1989, imports averaged 7.8 million B/D, a level roughly 65 percent higher than in 1985 and exceeded for a similar period only in the late 1970s.

Crude oil production fell more than 500 thousand B/D or 6.2 percent in the first half, as the year-to-year increases of roughly 40 to 100 thousand B/D in Alaskan production, which had in recent years provided a partial offset to the lower 48's continued decline, were reversed. About half of Alaska's first half decline of 143 thousand B/D was due to temporary restrictions on tanker traffic arising from the accident near Valdez in late March. But even without this constraint, U.S. production would have still dropped by roughly 450 thousand B/D for the period. Declines in total domestic crude oil production since the substantial drop in world oil prices in 1986 had previously been running in the range of 210 to 330 thousand B/D annually.

As a result of these trends, total imports exceeded domestic crude oil production for the first half of 1989, a development which has occurred only once before for a similar period, in 1977. Additional supplies from petroleum liquids extracted from domestically-produced natural gas, however, helped to keep the supply balance tilted towards the domestic side. Even so, total imports still accounted for 45.4 percent of domestic deliveries in the first half.

Though consumption growth so far in 1989 has likely slowed from the more than 3 percent average growth in deliveries over the previous three years, the 0.6 percent increase in this year's first-half deliveries may understate consumption growth. One reason for this is that the first half's growth rate is calculated against recently-revised data for 1988 from the Department of Energy, which, as has been typical in recent years, are higher than previously published.

These new data have pushed 1988's growth in deliveries up from 3.0 percent to 3.7 percent, and have had a similar-sized, but opposite, effect on 1989's calculated increase. Revisions over the past several years in the range of from 0.7 to 0.9 percent suggest that a similar revision in DOE 1989 monthly data (incorporated in our year-to-date estimates) may eventually occur. This uncertainty fogs the interpretation of this year's deliveries data to some extent. Thus, while possibly slowed in recent months as a result of more moderate economic growth and higher prices, petroleum consumption thus far in 1989 is estimated to have grown by about 2 percent.

The flat first-half performance for gasoline deliveries and the 2.4 percent decline for distillates seem to overstate the moderation in growth for these fuels, but kerosine jet fuel's slowing to a 1.6 percent increase was roughly in line with air traffic trends. Residual fuel oil deliveries still rose an estimated 6.2 percent, however, while deliveries of other oils continued at around last year's roughly 2 percent rate.

Refinery activity continued to rise in the first half, with utilization of capacity in actual operation—reaching more than 93 percent in June—similar to levels reached in the 1970s. Gasoline output for the month reached nearly 7.4 million B/D, the highest ever produced for the month of June.

PRODUCT SUPPLIED [1]

Gasoline

CONSUMPTION GROWTH MAY BE SLOWING.

Gasoline figures for the first six months illustrate some of the difficulties in tracking deliveries data on a current basis. What had been a moderate, 1.4 percent year-to-date increase for gasoline deliveries in last month's report has now slipped to "no change" for the first six months. Several factors account, at least arithmetically, for this seemingly large shift. First, the year-ago data now reflect the Department of Energy's annual revision, which, as has been typical in recent years, has resulted in slightly higher 1988 deliveries figures. Second, DOE's recently-released April deliveries figure was less than API's estimate and decidedly below the trend of the previous months. Finally, deliveries last June were substantially above trend, converting

	API ESTIMATES JUNE		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.0	(0.4)	17.2	0.6
Crude production[2]	7.6	(6.6)	7.8	(6.2)
Total imports[3]	8.0	11.5	7.8	9.0
Stocks (million bbl)[4]	1,055	(0.6)	na	na

this June's deliveries change from what would have been a moderate increase into an 0.3 percent decline.

Beyond these technical considerations, it would seem that the moderating of the economy and recent higher prices have begun to have a restraining effect on gasoline demand, but not to the extent that the flat first half's deliveries estimate might imply. June's deliveries, for example, compared against a more normal level a year ago, would still have shown about a 1.4 percent increase.

Data on travel, which had posed some problems in interpretation earlier this year due to unusual fluctuations, now suggest more clearly that the economy and higher prices are having some slackening effect on demand. The year-to-year increase of 2.8 percent for April (the latest available) was more than half a percentage point below last year's annual average increase in miles traveled. Though the extent to which the economy and other factors have slowed travel and gasoline consumption since then is not completely clear, it is unlikely that gasoline consumption has flattened out entirely, but rather is growing at perhaps only a 1 to 1.5 percent rate.

Distillates

FIRST-HALF DROP MAY OVERSTATE WEAKNESS. As with gasoline, distillate fuel oil's first-half decline of 2.4 percent, or about 75 thousand B/D, though serving as an indicator of moderation in consumption growth, appears to overstate the weakness in demand for this product. Some of the first half's deliveries decline stemmed from temporary factors, particularly the first quarter's substantially warmer weather which depressed heating oil consumption by enough to account for perhaps two thirds of the first half's year-to-year decline. Revision of first half 1988 data also cut this year's year-to-date increase by about 24 thousand B/D. Even so, some moderation in distillate consumption growth has likely been taking place, slowing from the pace that put deliveries growth at an average 3 percent per year over the past three years and at nearly 5 percent last year alone.

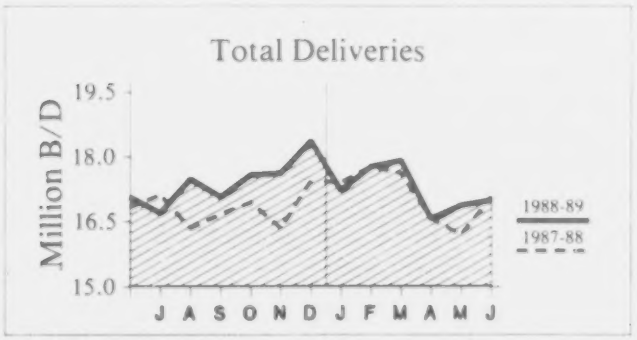
Data on the for-hire segment of the trucking industry have been showing 2 to 3 percent declines in the most recent months. However, industrial production and other economic data continue to show year-to-year increases, but smaller ones, an indication that the demand for on-highway diesel transportation as a whole is likely still rising modestly. Based on these trends, industrial distillate use would also be expected to be at least holding its own.

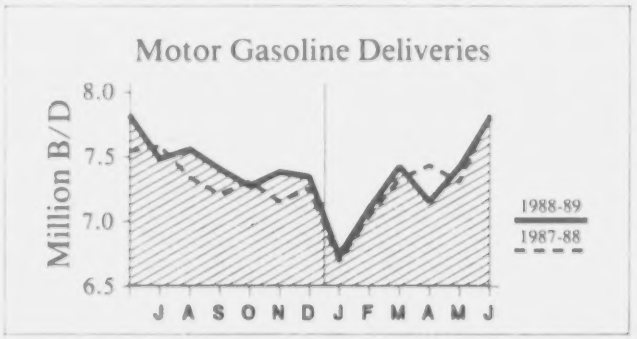
Rail traffic, too, though down by an estimated 1 percent in June, was up slightly for the first six months as a whole. Thus, recent indicators suggest that distillate consumption growth has continued in recent months, though likely at a more moderate pace than in 1988—perhaps on the order of 2 to 2.5 percent.

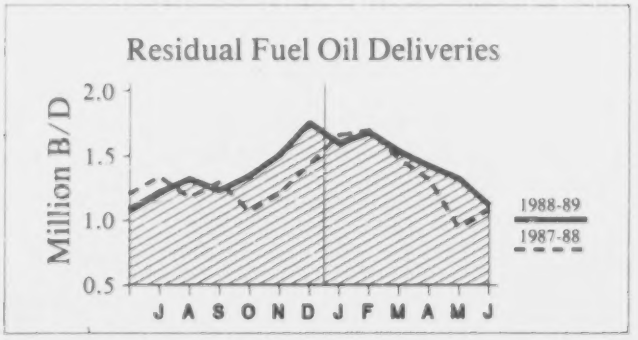
Residual Fuel Oil

ELECTRIC UTILITIES CONTRIBUTE TO FIRST-HALF RISE. Deliveries of residual fuel oil during the first half of the year averaged 1,446 thousand B/D, an increase of 6.2 percent from 1988. In June, deliveries are estimated to have been 1,120 thousand B/D, representing a decline of 15.4 percent from May but an increase of 3.4 percent from last year.

Electric utilities accounted for most of the increase in heavy fuel oil deliveries during the first half of the year. After adjustment for leap year effects, electricity generation increased by approximately 3 percent. Although output from hydroelectric and coal-fired sources increased in line with the increase in overall electricity demand, an estimated 5 percent decline in nuclear generation resulting from higher-than-anticipated downtime as well as periodic interruptions in gas supplies earlier







in the year resulted in an estimated increase in heavy fuel oil deliveries of more than 20 percent. Direct consumption is estimated to have grown even faster—almost 30 percent—with secondary and tertiary stock drawdowns supplying as much as a third of that increase in demand.

Deliveries of heavy fuel oil to the industrial sector, however, are believed to have grown only slightly during the first half of the year, with much of the slowdown in that increase apparently occurring during the second quarter. The impact of declining natural gas prices during the past several weeks as well as recent slower growth in industrial activity have apparently slowed growth in deliveries to this sector.

Bunker fuel deliveries were believed to have declined by between 2 and 3 percent during the first half of 1989 from levels of last year. Having risen steadily for several years, the decline indicates an apparent reversal of that trend. The shift, however, apparently reflects the displacement of potential sales of domestic bunker fuel—especially on the East and Gulf coasts—by more competitively priced fuel in European markets rather than a decline in shipping activity.

Kerosine Jet Fuel

DELIVERIES' GROWTH SLOWS WITH AIR TRAFFIC. Kerosine jet fuel deliveries rose 1.6 percent for the first half, less than half of last year's annual increase and reflecting recent trends in air traffic. Growth in deliveries last year, though still a little less than 5 percent, had already slowed from the 7 to 10 percent rates of the prior two years as the earlier, healthy growth in air traffic continued to moderate.

So far this year, the economy, higher fares, and strike activity have all helped to slow the growth in air traffic. Although first-half cargo traffic and international passenger travel were both up roughly 10 percent, an estimated 3 percent decline in domestic passenger traffic kept the increase in overall traffic to 1 percent or less. The weakness in air traffic growth was particularly apparent for the second quarter. While miles flown in the first quarter had risen only about 2 percent, the second quarter is estimated to have been flat to down slightly.

Other Oils

UP 2 PERCENT FOR FIRST HALF. Deliveries of other oils during the first six months of 1989 averaged 4,089 thousand B/D, an increase of 2.0 percent from the previous year. In June, deliveries were estimated to have been 3,967 thousand B/D, a decrease of 0.5 percent from last year.

Petrochemical products are believed to have accounted for most of the increase in other oils' deliveries for the first half of the year. Liquefied petroleum gas deliveries are estimated to have increased by more than 3 percent. Butane was the fastest growing product in that group, having expanded by an estimated 6 to 7 percent. The increased availability of butane as a petrochemical feedstock is believed to have resulted from EPA-mandated gasoline vapor pressure restrictions which have resulted in the reduced use of butane as an octane enhancer. Deliveries of propane, the largest LPG component, are believed to have grown by 4 to 6 percent. Ethane deliveries, however, are estimated to be similar to those of last year, having lost ground to other feedstocks. Heavier feedstocks—naphtha and gasoil—are estimated to have increased by 8 to 10 percent as a result of robust demand from petrochemical refiners.

Because of unusually wet weather in much of the country, asphalt and road oil deliveries are estimated to have been 2 to 3 percent less than those of the first half of last year. Refinery gas production, accounting for one sixth of total other oils deliveries, is believed to have been similar to that of the same period last year.

SUPPLY[1]

Production

ALASKA'S DROPOFF ACCELERATES U.S. DECLINE. Domestic crude oil production fell by 513 thousand B/D in the first half, accelerating from the 210 to 330 thousand B/D annual declines of the recent past. The decline brought domestic crude oil output to less than 7.8 million B/D, the lowest for a similar period in 25 years.

Increases in Alaskan production, which had been offsetting the lower 48's decline by 40 to 100 thousand B/D in each of the past three years, were reversed in 1989 as production for that state declined 143 thousand B/D for the first half. Only about half of that decline was the result of reduced North Slope production arising from temporary restrictions on tanker traffic following the Valdez accident in late March. Other than a 25 thousand B/D decline in the first half of 1981, this was Alaska's first year-to-year decline for a six-month period since North Slope production began in late 1977.

Lower 48 production also continued to decline, falling about 370 thousand B/D, year to year, in this year's first half. By midyear, production outside Alaska was estimated to be down by roughly 20 percent since early 1986, a decline of about 1.5 million B/D. Based on preliminary data, the decline trend so far this year in lower 48 production appears to be continuing at the rate of about 350 thousand B/D per year, similar to what is now estimated from a trend fitted to 1988 monthly data.

Natural gas liquids production, however, which accounts for roughly 1.6 million B/D of domestic supply in addition to crude oil production, has held steady in recent years, even rising slightly. For the first six months, petroleum liquids extracted from natural gas streams have risen an estimated 33 thousand B/D or 2 percent.

Imports

FIRST HALF HIGHEST IN TEN YEARS. Despite slower growth in deliveries, the rapid decline in domestic production for the first half led to a substantial increase in imports. After rising 11.3 percent in 1988, imports rose at close to the same rate, 9 percent, in the first half of this year, to 7.8 million B/D. This represents a roughly 65 percent increase from levels of only four years ago and the highest level for a similar period in ten years.

As a result of this increase, total imports as a percentage of domestic deliveries rose to 45.4 percent in the first half. This

was up from 42.0 percent one year earlier, but still slightly short of the all-time annual high of 47.7 percent set in 1977.

Product imports rose 114 thousand B/D, or 5.1 percent, for the first six months of 1989, with the largest part of the increase accounted for by residual fuel oil. Imports of gasoline and components were nearly even with those of a year ago, based on current data. Distillate imports were up 15 thousand B/D, while residual fuel oil imports rose 92 thousand B/D.

Refinery Operations

ACTUAL UTILIZATION ABOVE 93 PERCENT DURING JUNE.

Refinery activity continued to rise in the first half of 1989, with input to distillation units rising 0.6 percent, year to year. Input for June rose 2.7 percent and gasoline output, at nearly 7.4 million B/D, was the highest ever recorded for that month.

It should be noted that part of the apparent increase in the utilization rate from 83.8 percent in last year's first half to 85.6 percent so far this year is accounted for by the decrease shown in the data for "operable capacity". This, however, is the result of statistical reclassification of existing capacity rather than of a physical decrease.

Further caution is necessary in using "operable capacity" figures, since not all capacity listed as operable has been in recent operation. According to government data, 350 thousand B/D of "operable capacity" has been out of operation for more than a year—but this counts only complete refineries. Capacity in actual operation has never exceeded about 15.1 million B/D in the past year, contrasted with "operable capacity" which has been reported at over 15.9 million B/D.

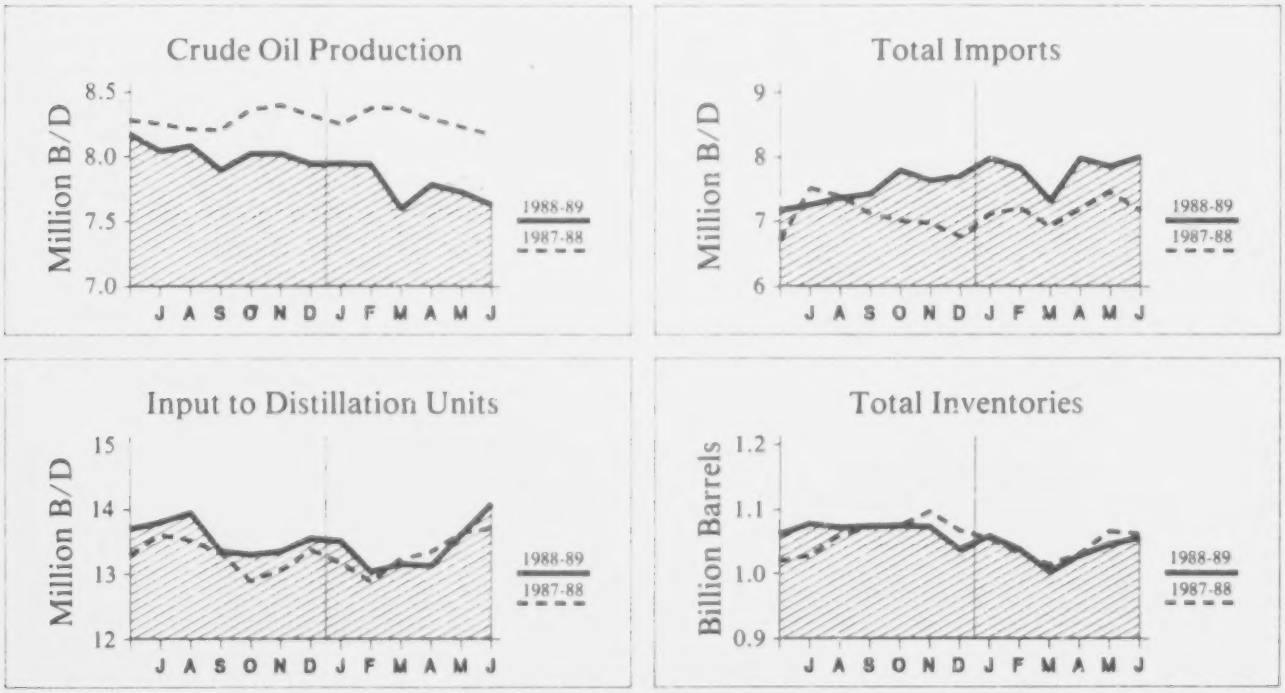
Thus, June's utilization rate of 89.8 percent of operable capacity, when re-computed on the basis of capacity in actual operation, rises to more than 93 percent—in the same range as the recent-year peak set last August of 93.7 percent. These rates are similar to those reached in the late 1970s.

Finally, these utilization rates include only the initial distillation phase of refinery operations. Downstream operations, such as those that play a major role in gasoline production, are not directly measured by these figures.

Inventories

TOTAL STOCKS RISE 10 MILLION BARRELS.

Total stocks rose 10 million barrels in June, ending the month slightly below the level of last June. Gasoline stocks dropped only slightly, and at 220 million barrels, were within the 210-230 million barrel range experienced for June in recent years. Distillate stocks rose slightly for June to 161 million barrels, while crude oil stocks declined by 11 million barrels to 334 million barrels.



1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 572 million barrels as of June 30, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	JUNE			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,795	7,817	(0.3)	7,264	7,266	-
Finished leaded motor gasoline*	898	1,481	(39.4)	959	1,420	(32.5)
Finished unleaded motor gasoline*	6,897	6,336	8.9	6,305	5,846	7.9
Naphtha-jet	200	215	(7.0)	200	211	(5.2)
Kerosine-jet	1,218	1,206	1.0	1,249	1,229	1.6
Distillate fuel oil	2,828	2,854	(0.9)	3,118	3,194	(2.4)
Residual fuel oil	1,120	1,083	3.4	1,446	1,361	6.2
All other oils[4]	3,967	3,985	(0.5)	4,089	4,009	2.0
Reclassified[5]	- 144	- 101	42.6	- 160	- 175	(8.6)
Total domestic products supplied	16,984	17,059	(0.4)	17,206	17,095	0.6
Exports	835	938	(11.0)	834	835	(0.1)
Total products supplied	17,819	17,997	(1.0)	18,040	17,930	0.6
Supply:						
Domestic production:						
Crude oil[6]	7,628	8,170	(6.6)	7,767	8,280	(6.2)
Natural gas liquids	1,658	1,616	2.6	1,647	1,614	2.0
Other supply[7]	886	907	(2.3)	905	833	8.6
Total domestic supply	10,172	10,693	(4.9)	10,319	10,727	(3.8)
Imports:						
Crude oil, total	5,957[10/]	5,252[10/]	13.4	5,482[10/]	4,952[10/]	10.7
Canadian	645	744	(13.3)	630	688	(8.4)
Other	5,312	4,508	17.8	4,852	4,264	13.8
Products, total	2,037	1,917	6.3	2,337	2,223	5.1
Residual fuel oil	538	336	60.1	694	602	15.3
Other	1,499	1,581	(5.2)	1,643	1,621	1.4
Total imports	7,994	7,169	11.5	7,819	7,175	9.0
Total supply	18,166	17,862	1.7	18,138	17,902	1.3
Stock change, all oils	+ 347	- 135	XXXX	+ 98	- 28	XXXX
Refinery Operations						
Input to crude oil distillation units	14,077	13,710	2.7	13,422	13,336	0.6
Operable capacity	15,674	15,934	(1.6)	15,676	15,912	(1.5)
Refinery utilization (%)[8]	89.8%	86.0%	4.4	85.6%	83.8%	2.1
Crude oil runs	13,934	13,487	3.3	13,241	13,107	1.0

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Jun. 30[9]	May 31[9]	Jun. 30	Previous Month	Year Ago
Crude oil[10/]	333.6	344.3r/	358.9	(3.1)	(7.0)
Unfinished oils	112.5	114.6r/	115.4	(1.8)	(2.5)
Total motor gasoline**	219.5	221.2r/	210.1	(0.8)	4.5
Finished leaded motor gasoline*	24.7	26.1r/	42.7	(5.4)	(42.2)
Finished unleaded motor gasoline*	156.0	155.2r/	132.2	0.5	18.0
Naphtha-jet	6.0	6.0	6.7	-	(10.4)
Kerosine-jet	40.0	39.1r/	38.8	2.3	3.1
Distillate fuel oil	100.9	98.7r/	110.4	2.2	(8.6)
Residual fuel oil	43.0	39.3r/	42.2	9.4	1.9
All other oils	199.9	181.8r/	179.3	10.0	11.5
Total all oils	1,055.4	1,045.0r/	1,061.8	1.0	(0.6)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-April, U.S. Department of Energy, May-June, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	2nd QUARTER		
	1989[1]	1988[2]	% Change
Products Supplied:			
Total motor gasoline	7,444	7,514	(0.9)
Finished leaded motor gasoline*	920	1,454	(36.7)
Finished unleaded motor gasoline*	6,524	6,060	7.7
Naphtha-jet	204	215	(5.1)
Kerosine-jet	1,195	1,178	1.4
Distillate fuel oil	2,861	2,837	0.8
Residual fuel oil	1,293	1,111	16.4
All other oils[3]	3,939	3,861	2.0
Reclassified[4]	- 144	- 115	25.2
Total domestic products supplied	16,792	16,601	1.2
Exports	838	809	3.6
Total products supplied	17,630	17,410	1.3
Supply:			
Domestic production:			
Crude oil[5]	7,712	8,229	(6.3)
Natural gas liquids	1,658	1,620	2.3
Other supply[6]	924	811	13.9
Total domestic supply	10,294	10,660	(3.4)
Imports:			
Crude oil, total	5,776[9/]	5,221[9/]	10.6
Canadian	633	717	(11.7)
Other	5,143	4,504	14.2
Products, total	2,158	2,051	5.2
Residual fuel oil	577	421	37.1
Other	1,581	1,630	(3.0)
Total imports	7,934	7,272	9.1
Total supply	18,228	17,932	1.7
Stock change, all oils	+ 598	+ 522	XXXX
Refinery Operations			
Input to crude oil distillation units	13,608	13,565	0.3
Operable capacity	15,671	15,910	(1.5)
Refinery utilization (%)[7]	86.8%	85.3%	1.8
Crude oil runs	13,450	13,350	0.7

Stocks (millions bbls.)	2nd QUARTER		
	1989[8]	1988[2]	% Change
Crude oil	333.6[9/]	358.9[9/]	(7.0)
Unfinished oils	112.5	115.4	(2.5)
Total motor gasoline**	219.5	210.1	4.5
Finished leaded motor gasoline*	24.7	42.7	(42.2)
Finished unleaded motor gasoline*	156.0	132.2	18.0
Naphtha-jet	6.0	6.7	(10.4)
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Distillate fuel oil	100.9	110.4	(8.6)
Residual fuel oil	43.0	42.2	1.9
All other oils	199.9	179.3	11.5
Total all oils	1,055.4	1,061.8	(0.6)

1/ Source: U.S. Department of Energy, April; May-June, API.
2/ Source: U.S. Department of Energy.
3/ Includes crude losses.
4/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
5/ Includes lease condensate.
6/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
7/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
8/ Derived by interpolating API weekly stocks data.
9/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 7

AUGUST 16, 1989

JULY 1989

SUMMARY

Total imports rose to 50 percent of domestic deliveries in July, the result of an above-average inventory build combined with this year's accelerated decline in domestic crude oil production and continued, though moderating, growth in consumption. A similar monthly share for imports had previously been experienced only for a few months in 1977.

July's volume of imports, at almost 8.6 million B/D, reached a new recent-year high, although it reflected above-average additions to inventory as well as supplies for immediate needs. Nevertheless, imports' share of domestic deliveries has risen substantially in the past several years, from 31.5 percent in 1985 to an average 46.2 percent for the first seven months of 1989. This is still slightly short of the annual high of 47.7 percent set in 1977.

Although in recent previous years, consumption increases have accounted for about two thirds of the growth in imports while declining production largely accounted for the remainder, the situation has shifted so far in 1989. This year, consumption growth has slowed, but the reversal of Alaskan production's previous upward trend has accelerated the decline in domestic crude oil production—making declining production the largest contributor to this year's increasing imports.

For July, domestic crude oil production fell by 574 thousand B/D or over 7 percent from one year earlier. Alaska contributed 234 thousand B/D to the decline; however, roughly half of that state's year-to-year drop was attributable to a temporary cutback due to maintenance work. Production in the lower 48 was down 340 thousand B/D or nearly 6 percent, year to year, and has declined by more than 20 percent since early 1986.

Following the first half's increase in deliveries of less than one percent, July's deliveries rose 1.7 percent versus one year earlier. However, it is likely that, because of higher prices and moderating growth in the economy, actual consumption growth has been slowing, rather than accelerating. Preliminary data for GNP, for example, show only a 2.8 percent, year-to-year increase for the second quarter, contrasting with 4.4 percent for last year as a whole. Based on trends in consumption indicators, we estimate that actual usage in July was growing at a rate of about 1 to 1.5 percent.

Utilization of refinery capacity in actual operation, running at over 93 percent for July, was close to highs experienced over the past fifteen years. Gasoline production continued at June's level of nearly 7.4 million B/D, which, similar to June's record, was the most ever produced for that month. Total inventories rose 21 million barrels during July, about twice the average rate of the previous five years.

PRODUCT SUPPLIED [1]

Gasoline

CONSUMPTION GROWTH MODERATING. Though gasoline deliveries rose 1.4 percent in July versus one year earlier, slower economic growth and prices higher than a year ago are likely continuing to depress actual consumption increases. Travel for May, the latest month for which data are available, continued to moderate from prior months, showing only a 2.5 percent increase year to year—a full percentage point less than in 1988. With the possibility that increases in travel may have continued to slow somewhat since then, underlying consumption growth may have slipped to 0.5 to 1 percent most recently.

Distillates

DELIVERIES' RISE STRONGER THAN FOR CONSUMPTION. July's 4.6 percent increase in deliveries, on the surface, appears relatively strong. However, as with other major products, it is possible that part of this reflects nonprimary inventory increases rather than unusual strength in underlying consumption.

Consumption growth, rather, appears to be continuing to moderate. In the trucking segment, overall diesel truck traffic has likely not suffered as much as the for-hire sector of the industry, for which an 8 percent drop in activity has recently been reported. However, overall on-highway diesel growth is currently estimated at only about 2 percent—less than half the growth experienced last year.

API ESTIMATES

	JULY		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.0	1.7	17.1	0.5
Crude production[2]	7.5	(7.1)	7.7	(6.4)
Total imports[3]	8.6	17.9	7.9	10.0
Stocks (million bbl)[4]	1,085	0.6	na	na

Rail traffic, too, has weakened, falling 7 percent, year to year, for July. Declines in coal shipments, and to a lesser extent, grain shipments, accounted for much of the decline. However, even excluding these commodities, traffic would still have shown a slight drop. With slower growth in industrial and other end uses as well, we estimate that distillate consumption has continued to rise, but perhaps at only about 1.5 percent most recently, compared with a 4.9 percent increase in 1988.

Residual Fuel Oil

DELIVERIES FALL 3.5 PERCENT.

Deliveries of residual fuel oil are estimated to have been 1,174 thousand B/D, representing an increase of 4.8 percent from June but a 3.5 percent decline from July 1988. The July estimate reflects a slowing trend in deliveries growth that has taken place during the past several months; thus the month-to-month increase is primarily the result of weak deliveries in June rather than unusual strength in July.

The electric utility sector accounts for much of the year-to-year decline. Electricity generation is estimated to have declined by 0.7 percent from levels of last July as a result of weather that was cooler than during last year. In addition, low oil prices bolstered last July's deliveries to high levels at the expense of natural gas, contributing to much of this July's year-to-year decline in total residual fuel oil deliveries. This decrease would have been slightly larger had it not been for occasional interruptions of natural gas due to pipeline repair and maintenance.

Deliveries to the industrial sector are believed to have increased only slightly from levels of last July as a result of the slowdown in the growth of industrial activity. A slight increase in secondary stocks, which had apparently declined during the first half of this year, is believed to have accounted for most of the small year-to-year increase.

Bunker fuel deliveries are believed to be below levels of last year despite an apparent uptick in activity in most regions during the past few weeks. The East and Gulf Coast markets, however, were reported to have been initially slow for much of July with activity showing some apparent strength by the end of the month. Although recent West Coast demand is believed to have risen substantially, activity in that region is believed to be only slightly higher than that of the previous year.

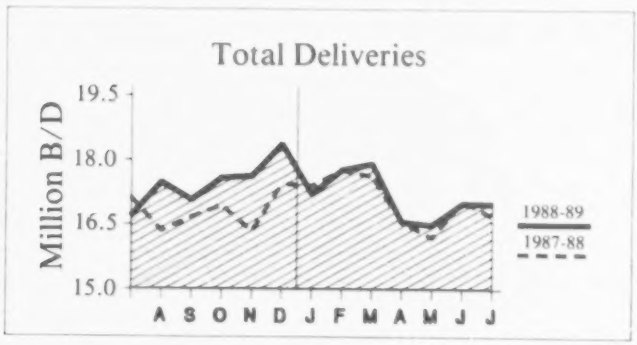
Kerosine Jet Fuel

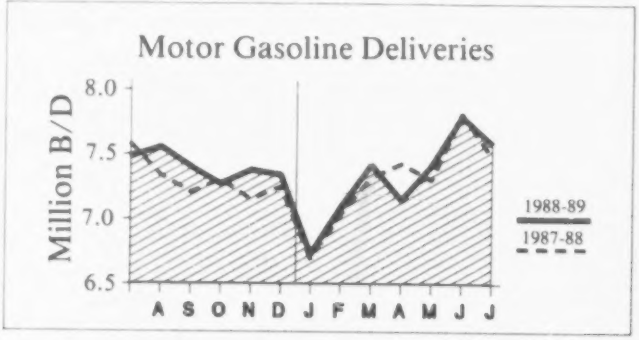
AIR TRAFFIC FLAT BUT DELIVERIES JUMP.

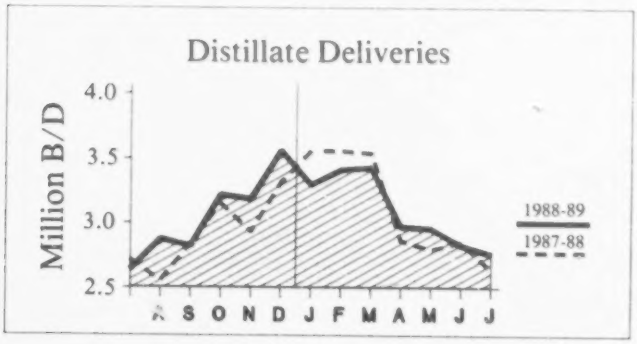
Among the major products, the discrepancy between probable consumption and deliveries growth was especially apparent for kerosine jet fuel in July. The month's deliveries jumped nearly 9 percent, following several months of minor increases or even year-to-year declines.

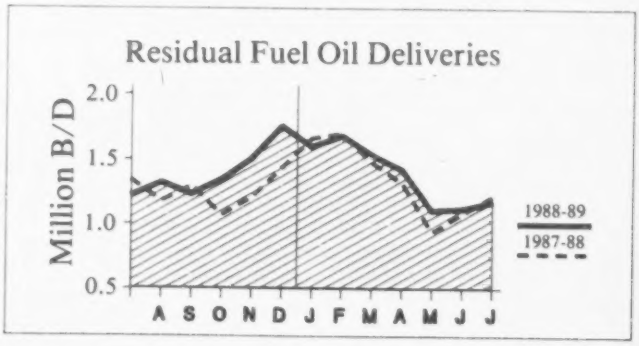
But recent trends in jet traffic have been in strong contrast to July's deliveries jump. Although revenue passenger-miles have shown some growth recently after several months of declining or flat performance, this has not necessarily translated into increased aircraft mileage. In June, for example, revenue passenger miles rose about 5 percent, year to year, but mainly because of increased load factors. Miles flown are estimated to have been only roughly even with a year ago.

Thus, even though July's large increase brings the year-to-date rise in deliveries to 1.6 percent, actual consumption is estimated to be continuing flat versus last year.









Other Oils

UP 1.4 PERCENT FOR JULY. Deliveries of other oils were estimated to have been 4,100 thousand B/D, representing an increase of 1.4 percent from July 1988. The year-to-year increase signifies an apparent continuation of a moderate but steady trend in deliveries growth. However, other indicators suggest that growth in direct consumption has been somewhat less than that of deliveries.

Deliveries of petrochemical feedstocks are believed to have been somewhat higher than those of last July, but the trend is believed to have slowed recently. In July, small increases in deliveries of lighter products were reported to be offset by declines in the heavier feedstocks. Butanes, which had been gaining increased acceptance as a feedstock during the past several months, are reported to have levelled off more recently.

Asphalt and road oil deliveries are believed to have recovered some of the earlier lost ground as a result of improvement in the weather, but are believed to remain below those of last July. Budgetary constraints are reported to have hampered building and maintenance activity in several regions.

SUPPLY [1/]

Production

MORE RAPID DECLINE CONTINUES. Domestic crude oil production fell 574 thousand B/D, or over 7 percent, in July from a year ago. Even without the temporary reduction in Alaskan production due to maintenance work, which accounted for about half of that state's 234 thousand B/D decline, Alaska would still have contributed substantially to the overall decline in U.S. production, as it has in each of the past nine months.

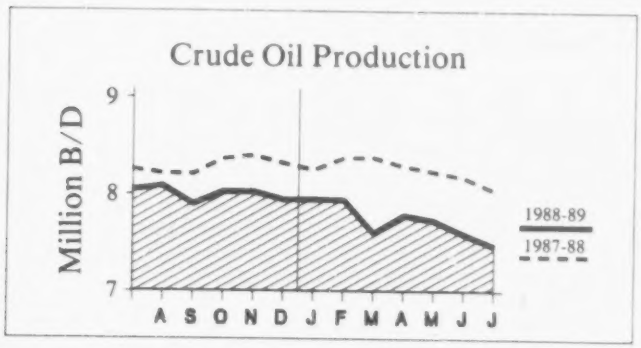
Production in the lower 48 continued its decline as well, falling 340 thousand B/D or nearly 6 percent, year to year. Since early 1986, production outside Alaska has fallen by 1.5 million B/D or more than 20 percent, due not only to reduced drilling of new wells, but also to less favorable economics for the maintenance of existing wells.

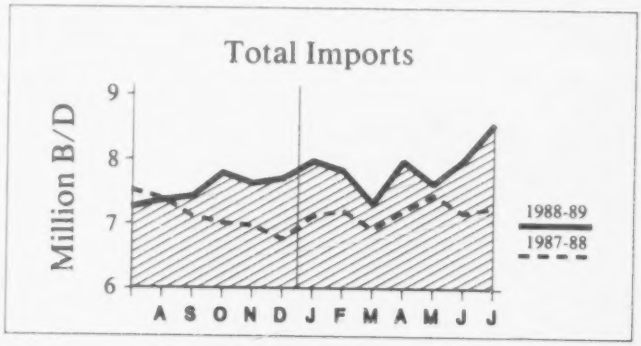
Well servicing activity so far this year has been proceeding at a level about even with the same period last year, but continues to be well below levels of only a few years ago. The number of active well-servicing rigs for the first half of 1989 was down about 28 percent from the same period in 1985.

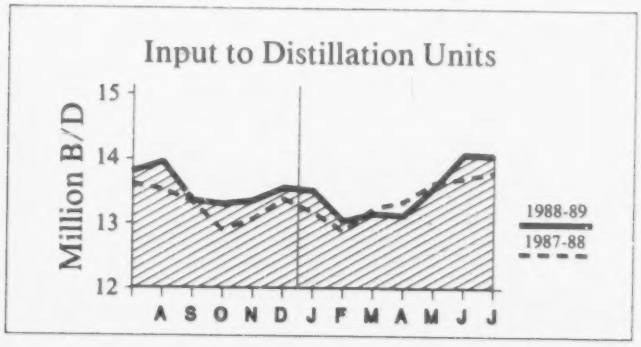
Completion of new wells, however, has continued to decline in the past year. According to the latest API **Quarterly Completion Report,** overall well completions for the first half were down by a fourth from one year earlier, attributable mainly to a decline in oil well completions. Gas completions, in fact, were estimated to have risen slightly. Exploratory oil well completions for the same period also declined and were less than a third of the level of four years ago.

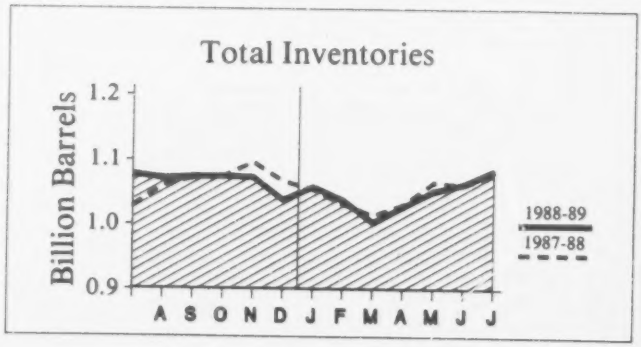
Imports

IMPORTS' SHARE REACHES 50 PERCENT. For the first time since mid-1977, total monthly imports reached 50 percent of domestic deliveries in July. Just as for the several scattered months in 1977 when this had previously occurred, a longer-term upward trend in imports, along with short-term swings which easily









deviate by half a million B/D or more from the trend in a given month, combined to push monthly imports over the half-way mark.

Though unusually strong imports in July were partly responsible for the month's high import share of 50.4 percent, if the decline in domestic production and growth in consumption continue at recent rates, such import shares are likely to become more frequent.

Only four years ago, the country's reliance on imports was 31.5 percent. But rising consumption and falling domestic production have boosted imports from 4.9 million B/D in 1985 to 7.9 million B/D for the first seven months of 1989. This has brought U.S. reliance on imports to 46.2 percent for the year to date, still slightly short of the annual record of 47.7 percent set in 1977.

Reflecting the available sources of additional supplies on world markets, an increasing portion of imports have come from OPEC producers, and the Middle East in particular. OPEC's share of U.S. imports has risen from 36 percent in 1985 to 50 percent for the first five months of this year. Imports from the Persian Gulf, which accounted for only 6 percent of U.S. foreign supplies in 1985, now amount to more than one fifth.

Though crude oil imports were substantially higher in July compared with one year earlier, product imports were roughly even. Imports of gasoline and components were off 89 thousand B/D from strong levels of a year ago, while distillates rose 100 thousand B/D from last July's below-trend imports. Residual fuel oil imports, though up 41 thousand B/D from the weak level of last July, at 520 thousand B/D, were still among the lowest monthly levels of the past twelve months, even allowing for seasonal patterns.

Refinery Operations

GASOLINE OUTPUT STILL STRONG IN JULY.

Input to distillation units rose 1.9 percent, year to year, for July, despite a brief reduction in operations on the Gulf Coast at the end of the month as a precaution against tropical storms. Utilization of capacity counted as operable, though calculated at over 90 percent for the month, understates the utilization rate for capacity in actual operation—which exceeded 93 percent. Comparable historical data are not available on a monthly basis before 1983, but the highest similarly-defined rate achieved in the past fifteen years is estimated to have been about 95 percent of operating capacity.

July's gasoline output stayed near June's high level of nearly 7.4 million B/D, up 2.8 percent from last July and, as in June, the highest for the corresponding month ever recorded. Distillate production rose 3.1 percent year to year.

Inventories

STOCKS RISE AT MORE THAN USUAL RATE.

With an increase about twice the size of the average of the previous five years, total stocks rose 21 million barrels during July. Gasoline stocks rose more than seasonally during July as well, increasing by 7 million barrels. Distillates' rise of 12 million barrels was about normal, bringing stock levels to 113 million barrels. This was close to end-of-month levels of recent previous Julys, which have ranged from 115 to 120 million barrels.

1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 574 million barrels as of July 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	JULY			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,584	7,482	1.4	7,314	7,297	0.2
Finished leaded motor gasoline*	805	1,338	(39.8)	934	1,408	(33.7)
Finished unleaded motor gasoline*	6,779	6,144	10.3	6,380	5,889	8.3
Naphtha-jet	223	212	5.2	205	211	(2.8)
Kerosine-jet	1,297	1,193	8.7	1,242	1,223	1.6
Distillate fuel oil	2,761	2,640	4.6	3,089	3,114	(0.8)
Residual fuel oil	1,174	1,217	(3.5)	1,373	1,340	2.5
All other oils[4]	4,100	4,042	1.4	4,067	4,014	1.3
Reclassified[5]	- 159	- 91	74.7	- 171	- 163	4.9
Total domestic products supplied	16,980	16,695	1.7	17,119	17,036	0.5
Exports	801	826	(3.0)	818	834	(1.9)
Total products supplied	17,781	17,521	1.5	17,937	17,870	0.4
Supply:						
Domestic production:						
Crude oil[6]	7,466	8,040	(7.1)	7,717	8,245	(6.4)
Natural gas liquids	1,604	1,618	(0.9)	1,637	1,614	1.4
Other supply[7]	850	1,125	(24.4)	900	876	2.7
Total domestic supply	9,920	10,783	(8.0)	10,254	10,735	(4.5)
Imports:						
Crude oil, total	6,377[10/]	5,058[10/]	26.1	5,607[10/]	4,967[10/]	12.9
Canadian	607	688	(11.8)	623	688	(9.4)
Other	5,770	4,370	32.0	4,984	4,279	16.5
Products, total	2,175	2,197	(1.0)	2,297	2,219	3.5
Residual fuel oil	520	479	8.6	671	584	14.9
Other	1,655	1,718	(3.7)	1,626	1,635	(0.6)
Total imports	8,552	7,255	17.9	7,904	7,186	10.0
Total supply	18,472	18,038	2.4	18,158	17,921	1.3
Stock change, all oils	+ 691	+ 517	XXXX	+ 221	+ 51	XXXX
Refinery Operations						
Input to crude oil distillation units	14,066	13,804	1.9	13,507	13,404	0.8
Operable capacity	15,576	15,958	(2.4)	15,662	15,919	(1.6)
Refinery utilization (%)[8]	90.3%	86.5%	4.4	86.2%	84.2%	2.4
Crude oil runs	13,880	13,617	1.9	13,325	13,181	1.1

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Jul. 31[9]	Jun. 30[9]	Jul. 31	Previous Month	Year Ago
Crude oil 10/	332.0	333.7r/	349.5	(0.5)	(5.0)
Unfinished oils	106.9	112.5	114.0	(5.0)	(6.2)
Total motor gasoline**	226.2	219.6r/	215.3	3.0	5.1
Finished leaded motor gasoline*	24.4	24.7	44.6	(1.2)	(45.3)
Finished unleaded motor gasoline*	161.9	156.2r/	134.9	3.6	20.0
Naphtha-jet	6.4	6.0	6.7	6.7	(4.5)
Kerosine-jet	41.5	40.1r/	40.1	3.5	3.5
Distillate fuel oil	112.9	101.2r/	120.0	11.6	(5.9)
Residual fuel oil	41.9	42.9r/	41.0	(2.3)	2.2
All other oils	216.7	207.1r/	191.2	4.6	13.3
Total all oils	1,084.5	1,063.1r/	1,077.8	2.0	0.6

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-May, U.S. Department of Energy, June-July, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

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SEPTEMBER 13, 1989

AUGUST 1989

SUMMARY

Continuing this year's more rapid rate of decline, domestic crude oil production fell 6.6 percent, or more than half a million B/D, in August compared with one year earlier. This year's acceleration in the rate of decline apparently is not due only to the recent downturn in Alaskan production. Preliminary data indicate that lower 48 production, as well, has been declining more rapidly during the first eight months of this year than as recently as last year's second half.

This, combined with the reversal in Alaska's previous upward trend, indicates that overall U.S. crude oil production has been falling at a rate of 5 to 6 percent per year so far in 1989, even after adjusting for temporary production curtailments in Alaska. This rate compares with an average annual decline of 3.2 percent for the previous three-year period and an average increase of a little less than 1 percent for the 1980-85 period.

Total deliveries fell slightly in August, declining 0.3 percent from one year earlier. The most important factor contributing to the decline was residual fuel oil's substantial, partly weather-related drop of 18 percent, though a decrease for the "other oils" category of almost 4 percent also played a role. Gasoline deliveries, though rising 1.4 percent year-to-year, were also weaker than at first apparent because the comparison was against below-trend deliveries a year ago.

However, distillate deliveries jumped 7.6 percent, and kerosine jet fuel, 6.8 percent, both increases well above what other indicators of consumption would suggest. Despite the month's year-to-year decline in total deliveries, consumption for products excluding residual fuel oil is still estimated to be growing slightly, at a rate of about 1 percent.

Imports in August remained near July's already strong level of 8.6 million B/D, and total imports' share of domestic deliveries stayed near the 50 percent mark as well. Although roughly 200 to 300 thousand B/D of August's imports represented supplies above those needed to meet current deliveries and maintain typical inventory patterns, the trend in imports has nevertheless been upwards. For the first eight months of 1989, imports were up 10.4 percent or about 750 thousand B/D.

At refineries, emphasis shifted from gasoline towards distillate during August. But despite distillate production levels up nearly 5 percent from last August, strong deliveries kept the inventory increase for that product to 4 million barrels, about half the average August increase of recent years.

PRODUCT SUPPLIED [1]

Gasoline

DELIVERIES WEAKER THAN THEY APPEAR. August's gasoline deliveries rose 1.4 percent, year to year —but because deliveries a year ago were an estimated 150 thousand B/D below trend, this August's deliveries were weaker than might first appear. If compared instead against last August's trend, this August's deliveries would have shown a small decline of about half a percent.

Although it seems unlikely that actual consumption was as weak as deliveries for the month, August's results continue to suggest that consumption growth has slowed in recent months. Miles traveled for June, the latest month available, increased 2.4 percent, year-to-year, continuing the more moderate growth that has become increasingly evident so far this year. Last year, travel had risen about 3.5 percent.

Though consumption growth seems to have been moderating, there have been several positive factors for gasoline consumption, as well, in recent months. Though slowing, the economy seems, at least from current data, to be doing at least moderately well. Disposable personal income, adjusted for inflation, has been up about 4 percent year-to-year in recent months, less than half a percentage point below last year's annual increase. And retail gasoline prices, which had jumped this past April and May and tempered demand somewhat, by August had declined again by about 7 cents per gallon. In fact, if adjusted for inflation, August's gasoline prices are at roughly the same level as one year earlier.

With the grade selection currently available to motorists, however, not all price effects have been in the form of changes in the level of consumption. This had been illustrated this past spring, when premium unleaded's share fell to about 22 percent in May from around 25 percent three months earlier, a significant drop in view of this grade's otherwise nearly steady

API ESTIMATES

	AUGUST		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.4	(0.3)	17.2	0.7
Crude production[2]	7.5	(6.6)	7.7	(6.5)
Total imports[3]	8.6	16.3	8.0	10.4
Stocks (million bbl)[3]	1,061	(1.0)	na	na

upward trend over the previous three years. In the past, price declines also have often been associated with increased shares for higher-octane grades. However, data that would show whether the most recent price decline ha... ...ar effect are as yet not publicly available.

Unleaded regular, however, still accounts for the bulk of gasoline sales, with a share approaching two thirds of the market, while mid-grade unleaded, even with recent gains, is currently estimated to account for only a little over 6 percent. Meanwhile, leaded gasoline's share has continued to shrink. For August, its share fell to less than 10 percent of deliveries for the first time.

Distillates

LARGE INCREASE CONTRASTS WITH LONGER-TERM TREND.

As in July, August's distillate deliveries again rose substantially, increasing 7.6 percent compared with one year earlier. Nevertheless, other indicators continue to suggest that consumption growth is not as strong as the recent trend in deliveries. With the moderation in the economy's growth, both truck diesel usage and industrial consumption can be expected to be growing at a slower rate than last year. Rail transport has continued to show small decreases from a year ago, with declines in most traffic categories.

Furthermore, the recent strength in distillate deliveries has been partly counterbalanced by smaller increases and even declines earlier this year. For the first eight months, distillate deliveries have risen only 0.9 percent. However, adjusting for the first quarter's unusually warm weather, the year-to-date increase amounts to about 2 percent, close to the current 1.5 to 2 percent rate estimated for underlying consumption.

Residual Fuel Oil

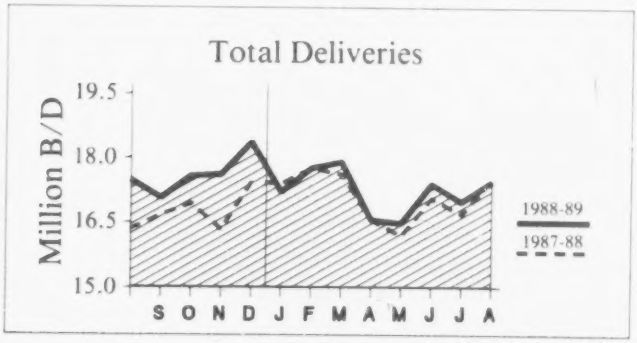
DELIVERIES FALL OVER 18 PERCENT.

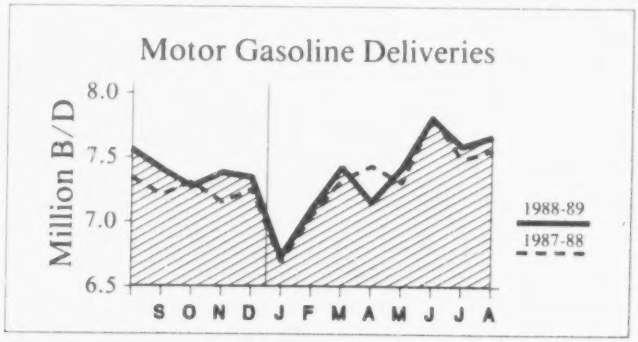
Deliveries of residual fuel oil are estimated to have been 1,080 thousand B/D for August, reflecting a decline of 8.0 percent from July and a decrease of 18.2 percent from August 1988. Although last year's deliveries were high as a result of low prices and warmer-than-normal weather, this month's deliveries estimate appears to reflect weakness in all of the major sectors.

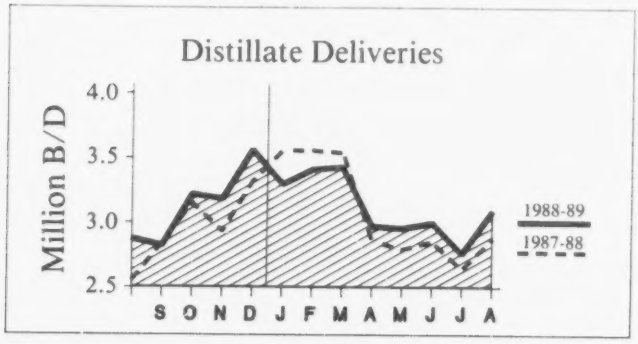
The electric utility sector is believed to account for much of the year-to-year decline. As a result of unseasonably cool weather, electricity output in August is estimated to have declined almost 5 percent from levels of last year, in contrast to the more than 3 percent average annual increase of the last several years. Moreover, the decline in deliveries to this sector, which is estimated to be between 20-25 percent, would have been even larger had it not been for the sizeable inventory build reported to have occurred at some utilities.

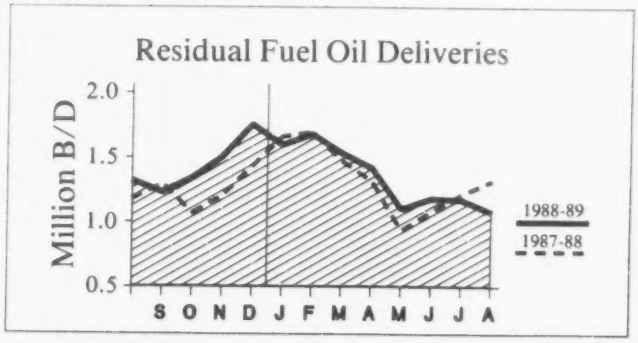
Deliveries to the industrial sector are also believed to have declined from levels of last year. Part of that decrease, however, is reported to reflect reductions in secondary stocks. Nonetheless, direct consumption is also believed to have declined by perhaps 2 to 3 percent from levels of last year as a result of the availability of more competitively-priced natural gas.

Although bunker fuel markets were slightly more active than last month, deliveries to this sector are believed to be substantially below levels of last year, largely as a result of the previous August's very high levels of deliveries. The East Coast markets are believed to have been the most active, while Gulf and West Coast activity is reported to have been more subdued.









Kerosine Jet Fuel

DESPITE FLAT AIR TRAFFIC, DELIVERIES JUMP.

Kerosine jet fuel deliveries experienced another strong increase in August, following a substantial increase in July. As with distillates, the 6.8 percent surge in deliveries seems to overstate actual fuel usage, since the trend in miles flown has continued to be flat versus one year earlier.

Aircraft mileage is largely dependent on passenger traffic, which accounts for nearly 95 percent of miles flown in the U.S. Since passenger traffic has continued to be roughly flat compared with one year earlier, damped in part by higher average fares, overall fuel usage is estimated to be flat as well.

In terms of ton-miles, however, cargo, much of it carried on passenger flights, takes on a larger share. As cargo traffic has continued to grow, its share has risen to about 26 percent of air transport ton-miles in the first half of 1989. This is up by more than a percentage point from one year earlier and higher by about 6 percentage points compared with its 1985 share of about 20 percent.

Other Oils

DROP IN DELIVERIES MAY REFLECT WEAK CONSUMPTION.

August's deliveries of other oils are estimated to have been 4,197 thousand B/D, representing an increase of 2.4 percent from July but a decline of 3.9 percent from last year. Although part of the year-to-year decline stems from last August's high deliveries, the most recent estimate suggests a slight downward trend in other oils consumption during the past few months.

Deliveries of liquid petroleum gases were reported to have declined as a result of scheduled downtime and weather-related curtailments at some petrochemical facilities. Nonetheless, the slackening of the pace of deliveries of these products apparently also reflects ongoing softness in the demand for olefins. Propane, however, apparently continues to be the feedstock of choice. Although deliveries of that product were reported to have declined as well, a reported drawdown in non-primary propane inventories suggests that actual demand may have moderated only slightly.

Asphalt and road oil deliveries, after adjustment for seasonal factors, are reported to have continued to recover from the depressed levels of the early summer. Because the wet weather had curtailed road building and maintenance during much of the summer, the recent dry spell has apparently resulted in a spurt of activity during the month. Because of continuing budgetary problems in several regions, however, demand apparently continues to trail that of last year.

SUPPLY

Production

CRUDE OIL DROP ACCELERATES SO FAR THIS YEAR.

Crude oil production in August was off by more than half a million B/D or 6.5 percent, with Alaskan production sharing in the decline in rough proportion to its one-quarter share of U.S. output. Lower 48 production fell an estimated 377 thousand B/D, year to year.

Based on preliminary data, it now appears that the acceleration in the decline in production this year is attributable not only to the reversal of Alaska's previous upward trend, but to a greater rate of decline in the lower 48 as well. Production outside Alaska had dropped sharply during 1986 along with wellhead prices, with the decline moderating in 1987 as prices stabilized and even rose somewhat. However, by the second half of last year, the lower 48's decline rate had increased to roughly 330 thousand B/D year to year. For the first eight months of 1989, the lower 48 production's decline, based on currently-available data, has grown to nearly 380 thousand B/D—suggesting that the decline trend this year may have been at least as great, if not greater, than late last year.

Alaskan production, too, once adjusted for temporary factors, would have fallen about 80 thousand B/D versus last year for the first eight months. Thus, the U.S. production decline as a whole has recently been running at more than 450 thousand B/D or 5 to 6 percent per year. This compares with an average decline rate of about 3.2 percent per year over the previous three years; for the 1980-85 period, when crude prices had been substantially higher than more recently, crude oil production had averaged an increase of a little less than 1 percent per year.

Imports

UP OVER 10 PERCENT FOR THE FIRST EIGHT MONTHS.

Total imports for August remained near July's high level, and at 8.6 million B/D, their share was still near the halfway mark at 49 percent of domestic deliveries. As in July, a portion of August's imports—approximately 200 to 300 thousand B/D—represented volumes beyond what would have been needed to meet current deliveries and fulfill normal inventory patterns.

Nevertheless, the underlying trend in imports has been upwards because of falling domestic production and rising consumption, and over the longer run, deviations in inventory patterns such as those of recent months tend to balance out, often making only a minor difference in imports comparisons. Adjusted for inventory changes, the growth in imports for the first eight months of this year would have amounted to 670 thousand B/D or a little more than 9 percent versus one year earlier. This was only slightly less than the actual increase of 10.4 percent.

Despite the strong increase in imports overall, which was entirely accounted for by higher imports of crude oil, product imports weakened in August. The decline for products amounted to 10.5 percent or 242 thousand B/D. Imports of gasoline and components were off by nearly 110 thousand B/D from strong levels a year ago; residual fuel oil imports, reflecting the weakness in deliveries for that product, dropped over 140 thousand B/D. Distillate imports, however, were about even with last August's levels.

Refinery Operations

YIELDS SHIFT TOWARDS DISTILLATE.

Developments in light-product yields for August reflected the recent pattern in deliveries, with emphasis shifting away from gasoline towards distillate. Gasoline output declined 1.6 percent from last August's high level to 7.1 million B/D, while distillate rose 4.6 percent. Gasoline's decline followed a June-July average which had set new records for summer gasoline production despite growth in deliveries which had not been particularly strong. August's 2.9 percent increase for residual fuel oil production, however, contrasted with that product's substantial decline in deliveries.

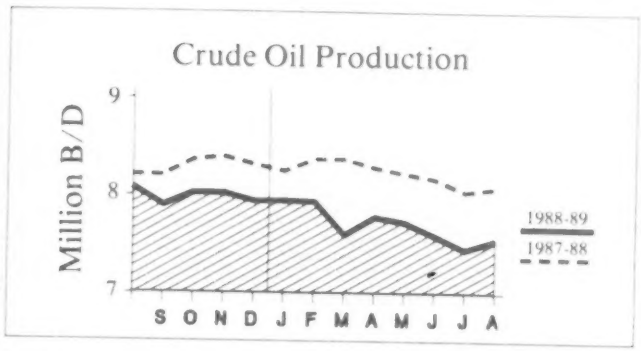
Overall, input to distillation units was up 0.8 percent from last August's already-strong levels. Utilization calculated using the traditional base of "operable capacity" exceeded 90 percent—but utilization of capacity in actual operation averaged even higher during August, at an estimated 93 percent.

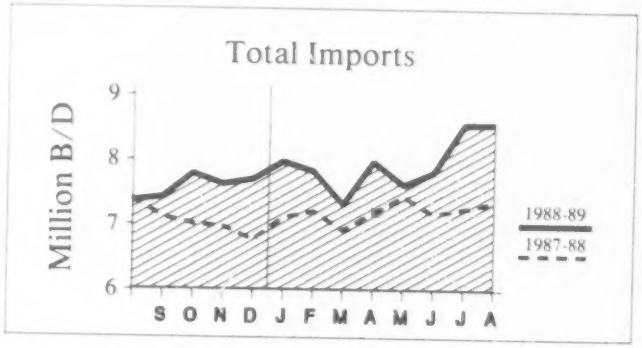
Inventories

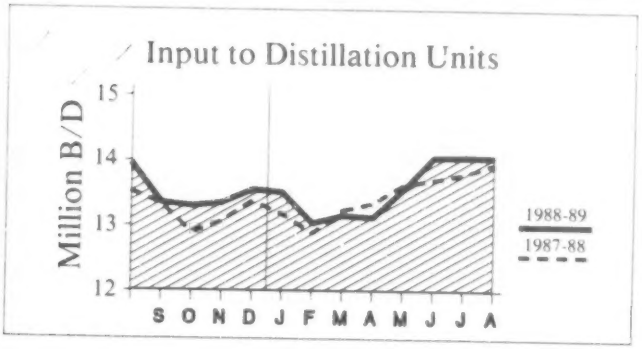
TOTAL STOCKS RISE MORE THAN AVERAGE.

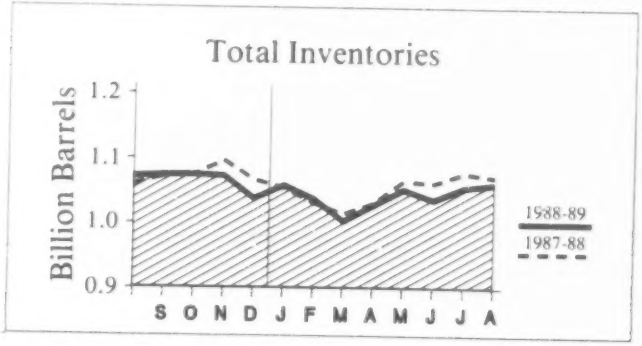
As in July, total stocks in August rose more than seasonally for the month. The 6 million barrel rise contrasted with a slight average decline for August in recent previous years. Crude oil stocks rose 4 million barrels for the month, and at 336 million barrels, were near the middle of the range of the past twelve months.

Gasoline stocks declined 9 million barrels in August, somewhat more than the recent-year average of about 3 million barrels for the month that ends the peak driving season. For distillate, despite high levels of refinery production, strong deliveries kept the rise in that product's inventories to 4 million barrels, about half the average increase of the previous five years. Distillate inventory levels at the end of August were 117 million barrels, towards the lower end of the recent historical range of 113-138 million barrels.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 575 million barrels as of August 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	AUGUST			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,660	7,556	1.4	7,360	7,330	0.4
Finished leaded motor gasoline*	759	1,324	(42.7)	914	1,397	(34.6)
Finished unleaded motor gasoline*	6,901	6,232	10.7	6,446	5,933	8.6
Naphtha-jet	226	204	10.8	209	211	(0.9)
Kerosine-jet	1,321	1,237	6.8	1,260	1,225	2.9
Distillate fuel oil	3,090	2,873	7.6	3,112	3,083	0.9
Residual fuel oil	1,080	1,320	(18.2)	1,343	1,337	0.4
All other oils[4]	4,197	4,366	(3.9)	4,095	4,059	0.9
Reclassified[5]	- 136	- 74	83.8	- 167	- 152	9.9
Total domestic products supplied	17,438	17,482	(0.3)	17,212	17,093	0.7
Exports	882	814	8.4	844	831	1.6
Total products supplied	18,320	18,296	0.1	18,056	17,924	0.7
Supply:						
Domestic production:						
Crude oil[6]	7,545	8,079	(6.6)	7,693	8,224	(6.5)
Natural gas liquids	1,557	1,616	(3.7)	1,608	1,614	(0.4)
Other supply[7]	841	1,034	(18.7)	894	896	(0.2)
Total domestic supply	9,943	10,729	(7.3)	10,195	10,734	(5.0)
Imports:						
Crude oil, total	6,504[10/]	5,064[10/]	28.4	5,701[10/]	4,979[10/]	14.5
Canadian	613	708	(13.4)	623	691	(9.8)
Other	5,891	4,356	35.2	5,078	4,288	18.4
Products, total	2,055	2,297	(10.5)	2,255	2,229	1.2
Residual fuel oil	439	581	(24.4)	638	584	9.2
Other	1,616	1,716	(5.8)	1,617	1,645	(1.7)
Total imports	8,559	7,361	16.3	7,956	7,208	10.4
Total supply	18,502	18,090	2.3	18,151	17,942	1.2
Stock change, all oils	+ 182	- 206	XXXX	+ 95	+ 18	XXXX
Refinery Operations						
Input to crude oil distillation units	14,058	13,953	0.8	13,575	13,474	0.7
Operable capacity	15,576	15,958	(2.4)	15,653	15,924	(1.7)
Refinery utilization (%)[8]	90.3%	87.4%	3.3	86.7%	84.6%	2.5
Crude oil runs	13,876	13,752	0.9	13,390	13,254	1.0

Stocks (millions bbls.)	1989		1988[2]	% Change from ...	
	Aug. 31[9]	Jul. 31[9]	Aug. 31	Previous Month	Year Ago
Crude oil [10/]	335.8	332.0	333.6	1.1	0.7
Unfinished oils	105.7	106.9	111.4	(1.1)	(5.1)
Total motor gasoline**	217.7	226.2	220.1	(3.8)	(1.1)
Finished leaded motor gasoline*	22.2	24.4	44.5	(9.0)	(50.1)
Finished unleaded motor gasoline*	156.5	161.9	139.0	(3.3)	12.6
Naphtha-jet	6.2	6.4	6.9	(3.1)	(10.1)
Kerosine-jet	41.7	41.5	39.7	0.5	5.0
Distillate fuel oil	116.8	112.9	125.7	3.5	(7.1)
Residual fuel oil	42.2	41.9	38.0	0.7	11.1
All other oils	194.6	187.3r/	196.0	3.9	(0.7)
Total all oils	1,060.7	1,055.1r/	1,071.4	0.5	(1.0)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-June, U.S. Department of Energy, July-August, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

Vol. 13, No. 9

OCTOBER 18, 1989

SEPTEMBER 1989

SUMMARY

Reversing the first half's 0.7 percent increase, total deliveries fell 0.9 percent for the third quarter. The contrast is actually greater than at first apparent since first-half growth would have been higher had not deliveries been temporarily depressed by mild winter weather.

The weakness in petroleum demand indicated by these deliveries figures is borne out in estimated underlying consumption trends for most major products, even those which had large apparent gains in deliveries for the quarter. Gasoline deliveries for the third quarter were lackluster, fuel switching brought residual fuel oil demand down substantially, and demand for petrochemical feedstocks slackened from previous strong levels.

Even for distillates and kerosine jet fuel, which both showed substantial gains in deliveries in recent months, underlying consumption growth was likely less than that of deliveries. Distillate fuel oil consumption is estimated to have increased at perhaps half the 4.3 rate for deliveries, and air traffic indicates that actual kerosine jet fuel usage is likely flat, despite the third-quarter increase in deliveries of 7.4 percent. Thus, even excluding the switching-related decline for residual fuel oil, petroleum consumption growth appears to have flattened in the third quarter.

Though deliveries were weak, imports requirements were still rising during the quarter because of domestic crude oil production's fall-off of more than half a million B/D or 6.6 percent versus one year earlier. Actual imports rose even more, averaging an estimated 350 thousand B/D greater than needed to maintain current deliveries and normal inventory patterns for the quarter. However, even without the above-normal inventory build, imports for the year to date would have risen nearly 8 percent, largely because of the decline in domestic production. The actual nine-month increase in imports was 10 percent, or more than 700 thousand B/D.

Departing from the typical August-September pattern, refinery activity in September remained high. Distillate production for the month jumped nearly 9 percent from one year earlier, keeping distillate stocks' rise to a near-normal 6 million barrels despite unusually strong deliveries.

PRODUCT SUPPLIED

Gasoline

DELIVERIES WEAK FOR QUARTER. Gasoline deliveries' weakness of the past several months continued in September, with deliveries falling 2.7 percent, year to year. For the quarter as a whole, deliveries were down a little more than 1 percent.

These declines suggest that the increase in prices earlier this year has still been having a dampening effect on consumption, though perhaps not quite as large as the deliveries declines indicate. Since May, retail gasoline prices have retraced only about a third of the January-to-May increase of about 15 cents per gallon. Once September's contraseasonal uptick is included, prices for the month, adjusted for inflation, were still about 6 percent higher than a year ago.

The slowing in gasoline demand has also been indicated in data on miles traveled. Growth in highway travel, which had averaged about 3.5 percent in 1988, slipped progressively from a little over 3 percent in March and April to 2.5 percent in May and June and to 1.9 percent in July. Since then, we estimate that year-to-year increases in travel have at best continued at July's rate.

Distillates

UNUSUALLY STRONG DELIVERIES LIKELY EXCEED CONSUMPTION. In contrast to gasolines' weak performance, distillate deliveries continued strong in September, rising nearly 7 percent over one year earlier to the highest September level ever. The increase for the quarter as a whole averaged 4.3 percent, a jump at least twice as large as estimated for consumption growth. However, such fluctuations in deliveries growth rates have not been unusual for distillate fuel oil in recent years. Even when averaged over quarters, year-to-year growth rates have deviated from annual growth rates by 4 percentage points or more about a third of the time.

	API ESTIMATES SEPTEMBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.9	(0.9)	17.1	0.1
Crude production*	7.5	(5.3)	7.7	(6.4)
Total imports*	8.3	11.3	8.0	10.0
Stocks (million bbl)*	1,091	1.6	na	na

Any continued growth in distillate demand in recent months has likely come from increases in transportation use, particularly in on-highway diesel, corresponding with the continued expansion of the economy. Rail traffic, however, has been down slightly in recent months, in large part due to lower grain shipments. September's weather, though colder than normal in some regions, was close to year-ago experience in the Northeast and likely had only a minor effect on heating oil consumption.

Over the longer term, demand in the residential and commercial sectors, which only account for about a quarter of annual average distillate fuel oil demand, has been relatively static over the past several years except for temporary weather fluctuations. Although heating oil's share of new housing in the Northeast has more than doubled from its share of 13 percent in 1981 to 30 percent in 1988, nationally it still accounts for only a little more than 5 percent of new construction. Natural gas, with a 54 percent share, and electric heat, with a 37 percent share, together still account for most of new housing's heating fuels.

Residual Fuel Oil

FUEL SWITCHING CUTS DEMAND. Residual fuel oil deliveries experienced another substantial decline in September, falling 17 percent versus one year earlier. This, combined with August's sizable decline and a smaller increase for July, brought the third quarter's drop to 10 percent—contrasting with the first half's roughly 4 percent increase.

As has often been the case, much of residual fuel oil's swings can be explained by the ease of fuel switching for a significant part of the market in response to changes in the relative costs of competing fuels. With residual fuel oil prices rising during September and spot natural gas prices continuing to soften, spot natural gas prices for the month are estimated to have been 10 to 15 percent lower than a year ago and residual fuel oil prices 10 to 20 percent higher.

With these developments strengthening the incentives for fuel substitution, the electric utility and industrial markets, which together account for about two thirds of residual fuel oil demand, are believed to have accounted for most of September's deliveries decline.

Kerosine Jet Fuel

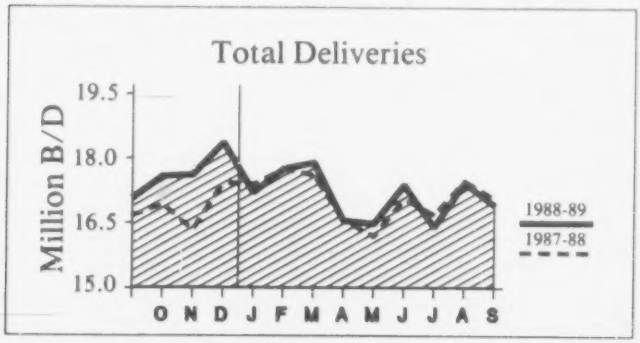
DELIVERIES STRONG DESPITE FLAT AIR TRAFFIC. Deliveries of kerosine jet fuel were up more than 13 percent for September and over 7 percent for the quarter—both much stronger increases than the first half's rise of only a little more than 1 percent.

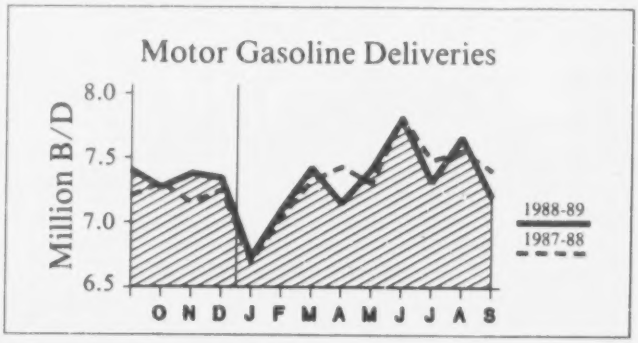
Air traffic growth, however, has followed a different pattern. In 1988, miles flown had risen about 4 percent; growth this year has progressively flattened from the first quarter's 1.8 percent increase to the roughly even performance of the most recent quarter. Because of their recent strength, deliveries, even averaged over the first nine months of the year, likely overstate actual consumption growth: deliveries have risen 3.2 percent for the year to date, while miles flown are estimated to have risen less than one percent for the same period.

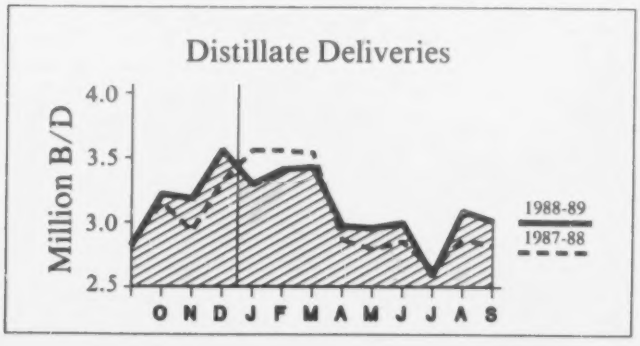
Other Oils

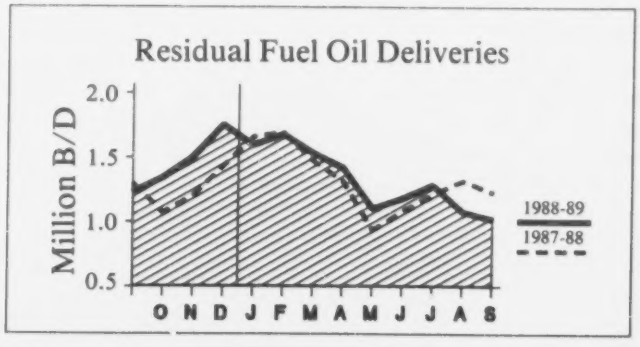
DOWN 2.7 PERCENT FOR THE QUARTER. Deliveries of other oils dropped 2.9 percent in September compared with one year earlier, continuing the weakness already evident in recent previous months. The quarter's 2.7 percent decline contrasted with the first half's rise of 1.7 percent, an increase due primarily to growth in deliveries of liquefied petroleum gases and additional refinery gas output as a byproduct of strong utilization levels.

The more recent decline is believed to be largely the result of slackening demand for petrochemical feedstocks, particularly ethane. Colder-than-normal September weather in the Midwest,









a major region for residential/commercial usage, is believed to have had only a minor effect on propane deliveries at this early stage of the heating season.

The recent slackening in petrochemical-derived demand contrasts with the 1988's strength, as shown in the recently-released *Sales of Natural Gas Liquids and Liquefied Refinery Gases*. That report, performed by API in conjunction with the Gas Processors Association and the National Propane Gas Association, shows ethane sales rose 7.3 percent last year after several years of decline.

In fact, the report shows that chemical uses of all LPGs rose except for propane. However, propane sales held their own overall due to increases for heating and industrial uses. With tightening standards for gasoline volatility in some areas, sales declined for LPGs used for gasoline blending (counted as part of gasoline rather than as "other oils" in API's and DOE's deliveries data). As in previous years, the Gulf Coast area (PADD III) accounted for the largest regional share of sales of LPGs and LRGs, at nearly 60 percent.

SUPPLY

Production

CRUDE OUTPUT FALLS MORE THAN HALF MILLION B/D.

Domestic crude oil production fell 5.3 percent in September against a year-ago level which had already been temporarily depressed by hurricane precautions in the Gulf last September. For the quarter, production fell more than half a million B/D or 6.6 percent; though the quarterly comparison is affected by the deviation in offshore production last September, this was more or less balanced by a temporary cutback in North Slope production this July for maintenance work.

Alaskan production for September was down by more than 140 thousand B/D or 7 percent from one year earlier; since its peak a year and a half ago, Alaskan production has fallen by roughly 200 thousand B/D or 10 percent. When combined with the steady decline in lower 48 production since early 1986, domestic crude oil production has dropped nearly 1.7 million B/D or 18 percent in the past three and a half years.

Imports

GROWTH IN IMPORTS CONTINUES.

With imports in September receding only slightly from August's high level, total imports' share of domestic deliveries remained near 50 percent for the third month in a row. For the quarter, imports averaged nearly 8.4 million B/D, roughly 350 thousand B/D above levels needed to maintain current deliveries and normal inventory patterns.

Even so, this year's accelerated decline in domestic crude oil production has kept the underlying trend in imports growing steadily, even though deliveries growth has recently slowed. If adjusted for shifts in inventory building and withdrawals, imports for the year to date would have risen 550 thousand B/D or nearly 8 percent. The actual increase in imports for the first nine months averaged 10 percent or more than 700 thousand B/D.

Though temporary problems at some Caribbean refineries resulting from hurricane Hugo may have played a minor role, product imports' September decline of 11.8 percent continued a longer pattern of decreases. For the quarter, product imports of 2.1 million B/D, which have mostly shown year-to-year declines since May, were off nearly 9 percent, or about 200 thousand B/D. Imports of gasoline and residual fuel oil were down by roughly 100 thousand B/D and 115 thousand B/D respectively. Kerosine jet fuel imports rose 30 thousand B/D.

Though down year-to-year for September alone, distillate imports were up for the quarter by about 20 thousand B/D, continuing the trend of the last several years towards increased incremental supplies from imports. Distillate imports for the first nine months of about 310 thousand B/D are roughly 135 thousand B/D higher than for the same period in 1985.

Refinery Operations

DISTILLATE OUTPUT JUMPS 9 PERCENT FOR SEPTEMBER...

Contrary to the usual August-September decrease, September's utilization continued near August's level of 90 percent of operable capacity—or 93 percent of capacity in actual operation. Over the past five years, the average August-September decline in input to distillation units has been 1.8 percent, versus this year's month-to-month decline of only 0.3 percent.

As a result, input to distillation units was up 5 percent from a year ago, with the focus continuing on supplying strong distillate deliveries. Distillate output reached more than 3 million B/D, up nearly 9 percent from a year ago and the highest September level in ten years. Gasoline production rose 2.3 percent and residual fuel oil output increased 3.5 percent despite lagging deliveries for both products.

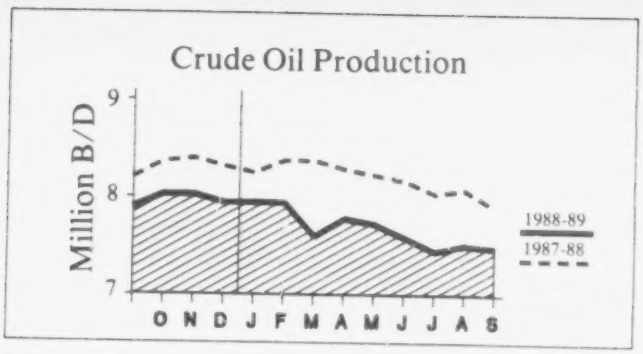
Inventories

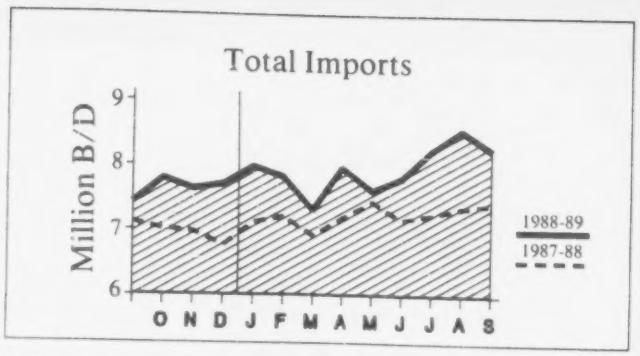
...BUT DISTILLATE STOCKS INCREASE AVERAGE AMOUNT.

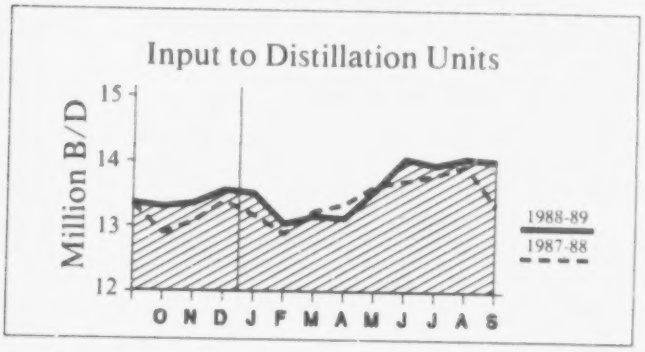
Total stocks rose 14 million barrels in September, about average for the month. But for the quarter as a whole, stocks rose approximately 35 million barrels more than normal, putting total inventories at about 2 percent above one year earlier.

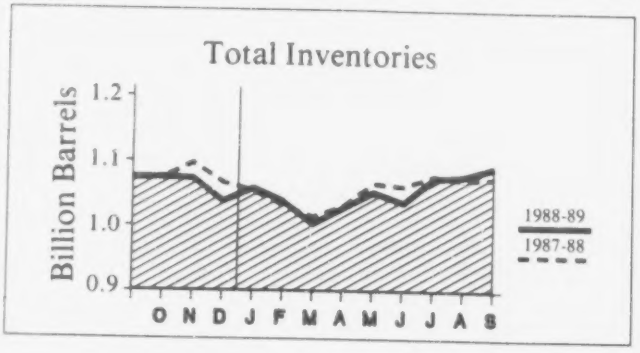
Despite record-setting deliveries, the high level of refinery production pushed distillate stocks up by 6 million barrels, or about average for September. At month end, they stood at 123 million barrels, a level below average for the month but within the 117-152 million barrel range of the previous five Septembers.

It should be noted that distillate stock draws have accounted for only a minor part of winter distillate supplies in recent years. Taking last season as a fairly typical example, the October-March draw amounted to only about 6 percent of distillate deliveries for the period. Refinery output, at 86 percent, accounted for by far the largest portion of supplies, with net imports making up the remainder.









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2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 555 million barrels as of September 30, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	SEPTEMBER			YEAR-TO-DATE		
	1989[1]	1988[2]	% Change	1989[3R]	1988[2]	% Change
Products Supplied:						
Total motor gasoline	7,203	7,404	(2.7)	7,312	7,338	(0.4)
Finished leaded motor gasoline*	711	1,289	(44.8)	891	1,385	(35.7)
Finished unleaded motor gasoline*	6,492	6,115	6.2	6,421	5,953	7.9
Naphtha-jet	198	207	(4.3)	206	210	(1.9)
Kerosine-jet	1,376	1,216	13.2	1,263	1,224	3.2
Distillate fuel oil	3,013	2,821	6.8	3,081	3,054	0.9
Residual fuel oil	1,021	1,230	(17.0)	1,321	1,325	(0.3)
All other oils[4]	4,316	4,444	(2.9)	4,108	4,103	0.1
Reclassified[5]	- 203	- 250	(18.8)	- 175	- 163	7.4
Total domestic products supplied	16,924	17,072	(0.9)	17,116	17,091	0.1
Exports	876	673	30.2	845	814	3.8
Total products supplied	17,800	17,745	0.3	17,961	17,905	0.3
Supply:						
Domestic production:						
Crude oil[6]	7,479	7,895	(5.3)	7,666	8,188	(6.4)
Natural gas liquids	1,547	1,621	(4.6)	1,595	1,615	(1.2)
Other supply[7]	970	885	9.6	938	895	4.8
Total domestic supply	9,996	10,401	(3.9)	10,199	10,698	(4.7)
Imports:						
Crude oil, total	6,234[10/]	5,128[10/]	21.6	5,731[10/]	4,996[10/]	14.7
Canadian	628	626	0.3	620	684	(9.4)
Other	5,606	4,502	24.5	5,111	4,312	18.5
Products, total	2,024	2,294	(11.8)	2,224	2,236	(0.5)
Residual fuel oil	423	698	(39.4)	617	596	3.5
Other	1,601	1,596	0.3	1,607	1,640	(2.0)
Total imports	8,258	7,422	11.3	7,955	7,232	10.0
Total supply	18,254	17,823	2.4	18,154	17,930	1.2
Stock change, all oils	+ 454	+ 78	XXXX	+ 193	+ 25	XXXX
Refinery Operations						
Input to crude oil distillation units	14,019	13,356	5.0	13,611	13,461	1.1
Operable capacity	15,576	15,965	(2.4)	15,657	15,928	(1.7)
Refinery utilization (%)[8]	90.0%	83.7%	7.5	86.9%	84.5%	2.8
Crude oil runs	13,834	13,261	4.3	13,435	13,255	1.4

Stocks (millions bbls.)	1989		1988[2]	% Change from . . .	
	Sep. 30[9]	Aug. 31[9]	Sep. 30	Previous Month	Year Ago
Crude oil [10/]	334.4	335.8	328.6	(0.4)	1.8
Unfinished oils	105.2	105.7	109.2	(0.5)	(3.7)
Total motor gasoline**	224.3	217.7	221.3	3.0	1.4
Finished leaded motor gasoline*	21.7	22.2	41.9	(2.3)	(48.2)
Finished unleaded motor gasoline*	162.1	156.5	140.8	3.6	15.1
Naphtha-jet	7.0	6.2	6.5	12.9	7.7
Kerosine-jet	40.4	41.7	40.1	(3.1)	0.7
Distillate fuel oil	122.6	116.8	131.5	5.0	(6.8)
Residual fuel oil	44.9	42.2	44.6	6.4	0.7
All other oils	211.7	210.7r/	191.9	0.5	10.3
Total all oils	1,090.5	1,076.8r/	1,073.7	1.3	1.6

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-July, U.S. Department of Energy, August-September, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
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* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	3rd QUARTER		
	1989[1]	1988[2]	% Change
Products Supplied:			
Total motor gasoline	7,395	7,482	(1.2)
Finished leaded motor gasoline*	756	1,317	(42.6)
Finished unleaded motor gasoline*	6,639	6,165	7.7
Naphtha-jet	209	207	1.0
Kerosine-jet	1,305	1,215	7.4
Distillate fuel oil	2,897	2,777	4.3
Residual fuel oil	1,131	1,256	(10.0)
All other oils[3]	4,166	4,283	(2.7)
Reclassified[4]	- 179	- 137	30.7
Total domestic products supplied	16,924	17,083	(0.9)
Exports	846	772	9.6
Total products supplied	17,770	17,855	(0.5)
Supply:			
Domestic production:			
Crude oil[5]	7,479	8,006	(6.6)
Natural gas liquids	1,552	1,618	(4.1)
Other supply[6]	1,000	1,016	(1.6)
Total domestic supply	10,031	10,640	(5.7)
Imports:			
Crude oil, total	6,288[9/]	5,083[9/]	23.7
Canadian	606	675	(10.2)
Other	5,682	4,408	28.9
Products, total	2,068	2,262	(8.6)
Residual fuel oil	470	585	(19.7)
Other	1,598	1,677	(4.7)
Total imports	8,356	7,345	13.8
Total supply	18,387	17,985	2.2
Stock change, all oils	+ 617	+ 130	XXXX
Refinery Operations			
Input to crude oil distillation units	14,010	13,708	2.2
Operable capacity	15,613	15,960	(2.2)
Refinery utilization (%)[7]	89.7%	85.9%	4.4
Crude oil runs	13,851	13,546	2.3

Stocks (millions bbls.)	3rd QUARTER		
	1989[8]	1988[2]	% Change
Crude oil	334.4[9/]	328.6[9/]	1.8
Unfinished oils	105.2	109.2	(3.7)
Total motor gasoline**	224.3	221.3	1.4
Finished leaded motor gasoline*	21.7	41.9	(48.2)
Finished unleaded motor gasoline*	162.1	140.8	15.1
Naphtha-jet	7.0	6.5	7.7
Kerosine-jet	40.4	40.1	0.7
Distillate fuel oil	122.6	131.5	(6.8)
Residual fuel oil	44.9	44.6	0.7
All other oils	211.7	191.9	10.3
Total all oils	1,090.5	1,073.7	1.6

1/ Source: U.S. Department of Energy, July; August-September, API.
2/ Source: U.S. Department of Energy.
3/ Includes crude losses.
4/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassifed during the production phase. So that there will be no double counting of these volumes, they are substracted from total domestic products supplied.
5/ Includes lease condensate.
6/ Includes Unaccounted for crude oil, Refinery input of other hydrocarbons, and Processing gain.
7/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
8/ Derived by interpolating API weekly stocks data.
9/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
* Included in motor gasoline.
** Includes finished leaded, funished unleaded, and motor gasoline blending components stocks.